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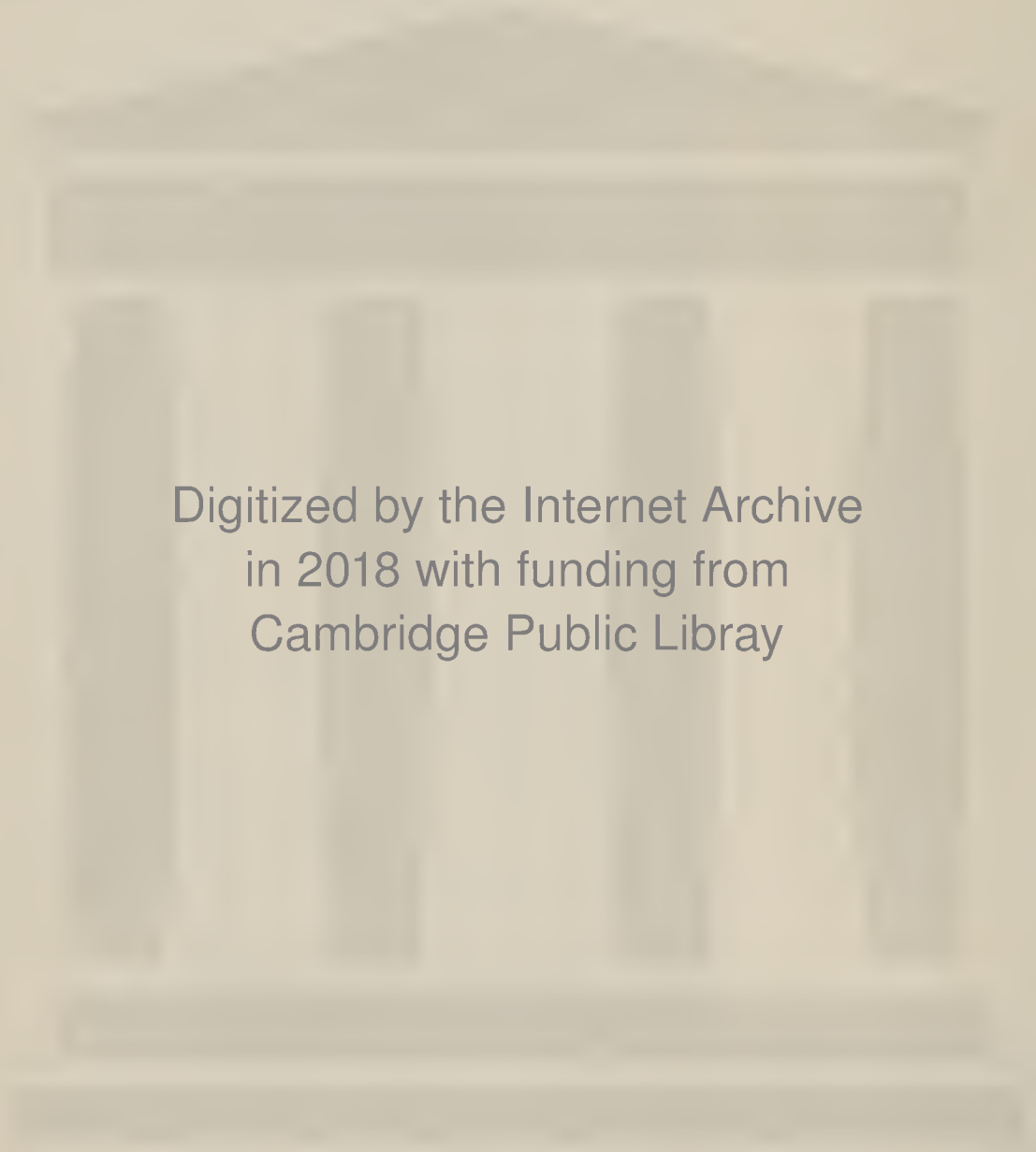

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CITY OF CAMBRIDGE.

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THE

MAYOR'S ADDRESS

AT THE

ORGANIZATION OF THE CITY GOVERNMENT,

JANUARY 6, 1890,

AND

THE ANNUAL REPORTS

MADE TO THE CITY COUNCIL,

FOR THE YEAR 1889.

BOSTON:
CASHMAN, KEATING & CO.
597 WASHINGTON STREET
1890

INAUGURAL ADDRESS

OF

HON. HENRY H. GILMORE,

MAYOR OF CAMBRIDGE.

Gentlemen of the City Council: —

This occasion becomes interesting and important, because we are assembled to inaugurate a new City Council, to which, for the ensuing year, is to be committed the municipal affairs of our good city of Cambridge.

The high honor conferred by being selected to serve our fellow-citizens, is, to each of us, more significant and impressive, because the voters, under the new or Australian plan, have exercised their privilege of suffrage in the most thoughtful and deliberate manner, free from solicitation, to a remarkable degree, — uninfluenced and unawed by personal contact or supervision, either in preparing or depositing their ballots.

Thus having had committed to our trust the corporate interests of nearly seventy-five thousand persons, composing one of the oldest communities in the New World, proud of its past, comparatively contented with its present; strong in energy, intellect, and prosperity, and filled with an undying faith in its grand future, we cannot fail to be impressed with the sense of our responsibilities. Nor can we permit ourselves to neglect or avoid the performance of any official duty, onerous or otherwise. It shall be, I feel sure, our common endeavor to meet the occasion, or the

demand, with an honest purpose, fortified by intelligent investigation, that we may avoid evil and exalt the right.

Your attention is invited to the financial condition of our city, as shown in this

SUMMARY.

Cash on hand Dec. 1st, 1888		$146,104 02
Receipts from all sources, Dec. 1, 1888, to Nov. 30, 1889,		2,366,374 90
		$2,512,478 92
Payments:—		
City Department accounts	$1,298,604 44	
Water	264,341 69	
Loans, funded and temporary	702,000 00	
National bank, county, and State taxes	116,931 27	
Cemetery fund, invested	2,214 50	
Taxes abated	20,722 71	2,404,814 61
Balance in Treasury Nov. 30, 1889		$107,664 31
Deduct balance unexpended bond account,	$54,906 48	
" " " on contracts, etc.,	36,359 00	91,265 48
Cash on hand Nov. 30, 1889, the year's bills all paid		$16,398 83
and this, notwithstanding two payments were made not anticipated or provided for in the annual budget, viz.:		
School-House lot, Ward 4	$6,000 00	
Paid on account of new High School building	4,654 35	
	$10,654 35	
Increase of the city funded debt during 1889, and bearing 4 per cent. interest per annum		$145,000 00
Less paid during the year		100,000 00
Net increase of city funded debt		$45,000 00
Increase of water bonded debt, during year, bearing interest at 4 per cent per. annum	$20,000 00	
Paid during the year	112,000 00	
Net decrease of water bonded debt	$92,000 00	
Showing net *decrease* of all bonded indebtedness in 1889, of		$47,000 00
The net *increase* of all bonded debt in 1888, was		193,251 32
Total funded city debt, Dec. 1, 1889	$1,944,000 00	
Total funded water debt, Dec. 1, 1889	1,631,500 00	
	$3,575,500 00	

Sinking Fund, to be applied to the payment of these Bonds at maturity, all securities reckoned at their face value only		
City account . . .	$483,060 78	
Water works account	728,658 53	$1,211,719 31
Total net debt		$2,363,780 69
Valuation of water works	$2,500,000 00	
Valuation of city property	1,500,000 00	4,000,000 00
Excess of resources		$1,636,219 31
Present borrowing capacity on bonds . . . . . which amount will be increased by the collection of accruing interest, and the stipulated payment to be made from the tax levy of 1890.		272,396 96

City bonds will, undoubtedly, be issued as required to pay for the new English High School Building, now under contract, probably not to exceed $200,000.

Temporary loans raised by the city, although $90,000 in excess of the year 1888, were effected with good judgment, and at such favorable rates of interest as to save nearly $3,600 in this item of expense, over the previous year.

Valuation of real estate for taxation, 1889		$50,324,175 00
Valuation of personal estate for taxation, 1889		14,960,100 00
		$65,284,275 00
Increase over 1888	$272,207 22	
Increase in number of houses	295	
Average valuation of all property for taxation for 1887, 1888, 1889		$61,333,447 29
The limit fixed by law for general municipal expenses is $12 00 per $1000 00 on this average valuation, and would yield for 1890		$736,001 36
Exempted from this limitation is the sum required to pay State and county taxes, required payments into the sinking fund, and the interest upon bonded debt. These changes absorb nearly one third of the entire tax levy.		

WIDENING OF DRAWS OF BRIDGES ON UPPER CHARLES RIVER.

Demands of a private, rather than of a public nature, prevailed in securing legislative action in 1888, requiring the cities of Boston and Cambridge to widen the draws in the so-called Brookline Street, River Street, Western Avenue, and Brighton Street bridges, and specifying that this work should be completed on, or before May 1st, 1889.

No action was taken by the City Government of 1888.

Efforts were made by the authorities of both cities, during the last session of the Legislature to secure

1st. An extension of time.

2d. A repeal of the Act.

As an extension and broadening of Commonwealth Avenue in Boston then planned, and under contract for construction, unavoidably involved the separation of grades at the East Boston Division, B. & A. R. R. crossing at Cottage Farm, which would necessitate a reconstruction, upon a new and elevated grade of nearly the whole length of the Brookline Street bridge, at a cost to Cambridge of many thousands of dollars, it appeared to us a simple matter of equity that further time should be allowed in order to perfect plans and provide means.

Influences adverse to the cities' interests unfortunately again prevailed; and it will, therefore, be necessary for you to arrange for funds for undertaking and completing the work upon the four bridges without delay. A rough estimate fixes the sum, to be provided by Cambridge, at $35,000.

HARVARD BRIDGE AND FRONT STREET.

The public is generally well informed as to the condition of Harvard Bridge, completed, except asphalting the side-walks, and a few minor details of construction, and could be thrown open to use at any time.

By direction of the City Council, the Mayor applied to the Railroad Commissioners, many weeks ago, to define the crossing of Front Street and the Boston and Albany Railroad, at grade, and certify the details thereof to our City Government. The request has not been granted. The published decision of the Commissioners is, that not until an imperative necessity can be shown for a crossing at grade, will they consent to it. A more intimate acquaintance with legislation relating to this matter, discloses other complications to which, at the proper time, your attention will be called more explicitly.

No public use of the bridge or avenue can be had lawfully, until the details of the railroad crossing are defined.

DEPARTMENT OF ROADS AND BRIDGES.

Last year, the Committee having in charge this important branch of the public work, in conjunction with the Superintendent of Streets, received from the Mayor the suggestion to apply a thorough system of *minute repairs* upon the highways.

Whilst this meritorious and economical method, always promptly available, has had more than a partial application, with excellent results, yet much remains to be done in

putting this system into constant and intelligent operation. This department might wisely adopt regulations to be observed by every employee, in certain respects similar to those promulgated by the steam-railway managers to their section men.

The Committee effected a fair and favorable contract for the delivery of several thousand tons of cracked stone, graded to required sizes, on cars on the line of the Fitchburg Railroad. The conditions would have been more advantageous to the city had it owned or controlled several landing yards where the stone might have been accumulated in large quantities, and permitting unloading of cars on arrival. Teams and men have lost much valuable time owing to non-arrival of cars when expected, or by cars being set at unavailable locations.

It is settled beyond contention that cracked stone, the hardest always to be preferred, is the best available material for road building and road repairs. The best work can only be done by judiciously selecting the size of stone best calculated to fit the demand, and the common fault is to skim the surface, instead of cutting down to a level that will allow of a substantial depth of stone to be bedded; and another is to use grades of stone near the surface too large in dimension, rather than otherwise.

Defects in streets and side-walks and obstructions have, in most cases, been promptly and faithfully noted by the patrolmen, daily reported by the Chief of Police to the Mayor, and by him referred to the Superintendent of Streets, by whom immediate repairs were ordered. This innovation upon former custom has radically modified the list of causes of action against the city.

The operations of this department for the past year, with a recital of its needs, and also certain recommendations worthy of your consideration, are clearly and ably set forth in the Superintendent's report. It is only fair to say that the work performed upon the streets during 1889, equals, at least in quality and value, that of any previous year, and it is only necessary to continue liberal appropriations, and wise administration, to secure and maintain as good street conditions in Cambridge, as may be found elsewhere.

STREET CLEANING.

During 1889 more than ordinary attention was given to keeping the streets clean throughout the city.

Regard for the public health, no less than a response to popular sentiment, will require still further efforts in this direction. This work should be regularly and faithfully performed.

The co-operation of traders and their assistants is earnestly desired in preserving a clean and tidy condition of the streets in the business sections. It has frequently happened, within a day or two after cleaning has been done, that loose papers, of many colors and kinds, have been swept out or cast off to drift into the gutters, or be driven by the wind up and down the streets. This is not creditable, and a visitor is likely to carry away bad impressions.

Bill-posters should be required to gather and remove such material as they take from their boards, or that otherwise become detached, to some suitable place of deposit. Whoever casts any obstruction into any of the streets, or

ways of the city, should be brought to answer before the District Court.

STREET GRADES READJUSTED,

occasioned by the re-laying of the tracks of the West End Street Railway Co., cannot fail to meet the approbation of the people.

STREET WATERING

has been extended over a larger area than heretofore; yet the revenue available for this work, owing to an unusual rainfall (about 60 inches), was not all expended.

In this connection, I earnestly recommend that an

EMERGENCY FUND,

not exceeding two thousand dollars, be provided at an early day, made subject to the Mayor's warrant, any part of which may be by him applied to such uses only as, in his judgment, the interests of the citizens may demand. This provision is suggested principally by reason of the inability to expend public money lawfully for street watering, even the principal business sections, in the early spring, when furious dust storms affect the public health no less injuriously than the goods of our traders and the temper of our people.

APPRECIATION.

I commend the drivers of the city teams, who have daily taken either coils of wire, loose stones and bricks, old cans,

kettles, etc., from the streets. Let this be continued with increased vigilance.

The drivers of the ash-carts have thoughtfully covered their loads, regardless of the weather conditions, when ready to proceed to the dumps, and our people have consequently escaped an irritating and frequently injurious experience suffered in previous years.

FIRE DEPARTMENT.

Whilst cheerfully according to the veteran Chief and the Assistant Engineers the meed of praise to which they are entitled, and commending all faithful officers and members of the department for their good record the past year, it is my duty to call more particular attention to the condition and needs of this department.

The disastrous fires that have recently occurred at Boston and Lynn naturally excite the attention of our citizens to our situation. The enquiry extends not only to the character of its organization, to what dependence is to be placed on the available apparatus, but to its membership, and the efficiency of its discipline.

That the organization might be improved I entertain no doubt. That the apparatus should be increased in proportion to the rapid development in building for residential, business, and manufacturing purposes, no prudent citizen will deny. Occurrences that have demanded official investigation and decided action, in consequence of indulgence in pernicious habits, or of a loose morality, aroused the suspicion and the fear that there might only be lacking strict surveillance, or the inviting opportunity, to disclose other irregularities.

The sense of relief felt throughout the community following the exoneration of the two members charged with theft at the Boston fire, is equal to their joy in having their honor vindicated.

I recommend the consideration of a plan to put the Department in charge of a Board of Commissioners composed of three citizens. One to be appointed by the Mayor and Aldermen for one year, one for two, and one for three years; vacancies to be filled by similar appointment. A member of the Commission may serve as Secretary and receive a salary; the other members to receive no compensation.

The Commission should have power to discharge from membership, for cause, but their recommendations for appointment, or for promotion, should be proceeded with as provided by the City Charter. The department, in this way, would be placed upon a reliable and substantial business basis.

DISCIPLINE AND MEMBERSHIP.

Are the rules and regulations of the department faithfully and always observed? We are convinced the very large majority of our firemen are as good men, and as invincible, as ever answered an alarm. In justice to them, to the underwriters, and especially to the property owner, who is willingly taxed to pay the salaries of true and faithful men, those of negative merits or of bad habits, if any such there are, should be eliminated from the service.

It is my determination to nominate only such persons for members of the Fire Department as sustain good, moral

characters; who are of strictly temperate habits, and endorsed by reliable citizens to whom they have been known for a term of years. That they may be known to be physically qualified, a certificate must be produced from the City Physician. Their mental acquirements, and record of experience, to be furnished in their own hand-writing, and the statements made substantiated under oath. The person, for every reason best qualified to perform the required service, will be named to the Hon. Board of Aldermen for confirmation.

It is time that the fever of excitement attending the selection and appointment of a person to any position in this department, especially as displayed by persons connected with it, temporarily or otherwise, should cease. They may charitably conclude that others in authority are controlled by at least as high a sense of duty as are they, and remain contented if their own duty is well performed.

The annual report, submitted by the Chief, contains information of much value, and he presents reasons for certain recommendations that cannot be easily controverted.

POLICE DEPARTMENT.

It affords me pleasure to have the opportunity, following a year's experience, to speak in terms of praise of the Chief of this department. He illustrates that a policeman may at the same time be a faithful officer and a gentleman, and his deportment, as well as his devotion to duty, is an object-lesson calculated to impress the intelligent members of the force, who desire to stand high in the service, and who hope for promotion by merit.

The several captains of stations, I am informed, have supported their Chief with becoming zeal and steadfastness, so that the result is, that the rank and file, almost without exception, have developed a more satisfactory condition of discipline, and, as a whole, have performed better service than ever before.

The remarks applied to the membership of the Fire Department are equally pertinent to this. Pernicious personal habits; deceit; a disposition to shield any law-breaker by giving warning of an intended search of premises, or anticipated arrest; acceptance of a bribe; habitual association with persons of loose character; a listless, half-hearted, or semi-mutinous response to duty call; either of these disqualifiations should merit prompt dismissal, whenever, or by whomsoever disclosed.

The city of Cambridge cannot afford to pay round salaries to men whose only evidence of respectability and trustworthiness is the uniform in which they stand. Moreover, the statement under oath of a Cambridge policeman should be supported by a reputation, and a character sufficiently favorable and well rooted, as to have equal weight and credence with the evidence of an average citizen, before any court.

A prompt increase of the regular force is recommended by the Chief, and cannot well be avoided.

For the sake of better protection to person and property, for securing with certainty prompt and faithful service on the part of patrolmen, and the exceedingly desirable facility by which communication can be established between them and the central station; for humanity's sake, in quickly, quietly, and decently transporting the person charged with

crime, the drunken, or frantic individual, of either sex, to the police headquarters; the means at hand for the immediate despatch of a detail of men to fires, furnished with ropes to cut off the streets, with axes, with ambulance apparatus of various kinds to meet emergencies; to grapple aggressively and effectively with disorder and riots, and for other good reasons not here enumerated, the Police Electric Signal system should be adopted and introduced without delay.

In this opinion the Committee on Police for last year, the Chief of the department and his principal officers, concur, and to them is best known the needs as well as the great usefulness of this important auxiliary.

Ten or twelve men, added to the force, would not be of so much advantage to the general security of the city, as will the adoption of this system.

PUBLIC SCHOOLS.

The high character of this most important department is steadfastly maintained. The following statistics will prove interesting: —

SCHOOL STATISTICS FOR 1889.

Number of pupils the first of December	10,711
Number of teachers	251
Cost of the day schools, not including expenditures for new school-houses	$229,421 31
Increase over last year	4,012 74
Cost of the schools per pupil	23 03
Less than last year per pupil	0 07

The new school-house for Ward Four, the plans for which are nearly completed, should be begun early in the spring.

Respectfully submitted,

FRANCIS COGSWELL.

December 23, 1889.

The mid-year graduating exercises of 1889 were, in some respects, unusually interesting. Those of the High School at Sanders Theatre, embraced several novel features, and evidences of deep interest were exhibited by the parents and friends of the graduates, who thronged the beautiful theatre, and manifested their pleasure and satisfaction, — yes, and admiration for those who were about to separate from their school associates, with honorable distinction.

In being permitted to present the well-earned diplomas to the class, the Mayor found real pleasure, as he also did in repeating a similar ceremony at the Webster Grammar, and the Latin Schools.

NATIONAL FLAGS DISPLAYED.

A sentiment representing much to commend it, appears to have become contagious, causing the flag of the United States to be raised and displayed upon the public school buildings, and they have been donated by liberal-hearted citizens, resident in different sections of the city.

Acceptances of these gifts have been accompanied with descriptive and commemorative exercises, of a peculiarly interesting character, calculated to intensify the love of country, and cause to be still more ardently cultivated a true, patriotic ardor, based on intelligence, virtue, and justice.

SCHOOL-HOUSES.

Earnest and well-directed efforts have been made the past year by the Committee on Public Property, and the Superintendent of Public Buildings, to secure the best

means and methods for ventilating and heating the school-houses, and to do all other things required to make them safe, wholesome, and comfortable. A great deal of patient and exhaustive investigation has also been directed towards arranging plans for the new English High School building, —its heating and ventilation. The Peabody school-house, on Linnaean Street, has been completed, and is occupied. The Putnam, at East Cambridge, is being rapidly and creditably constructed, and plans are under view for the new house in Ward 4.

SCHOOL COMMITTEE.

The labors of the School Committee cannot be too highly valued. To credit them with punctual attendance at regular meetings, vigilant oversight of the schools, and a manifest interest in them and whatever is designed to elevate and improve them, is only offering the fraction of an honest tribute to each member of the Board.

The Mayor desires to acknowledge the courtesies extended to him as chairman, *ex-officio*.

Late in the year a vacancy was created by the resignation of Judge William H. Orcutt, occasioned by his removal from the city. For many years this gentleman had given earnest and careful service, and his well-considered opinions, and sound conclusions, deservedly had weight and influence with his fellow-members.

WATER-WORKS.

The report of the Water Board sets forth, with considerable detail, and clear statistical tables, the revenues, financial resources, condition, and requirements of this

department, and, as it always has been, is worthy of your careful perusal.

The recommendation of the Board, that Alewife Brook be cleared of obstructions, is earnestly endorsed, and it is hoped no unnecessary delay will be allowed in proceeding to this important work.

As a city ordinance cannot lawfully be suspended, Section 24 of Chapter 42, Revised Ordinances, of 1889, should either be amended or repealed. It requires ten dollars to be paid annually to the Water Department, for each fire hydrant, of which there are now 656, at $10 $6,560 00
For each reservoir, 13, " 10 . . . 130 00
and one cent per hundred gallons for water used in watering the streets; 51,317,498 gals. at 1 ct. per 100 gals. 5,137 75

$11,827 75

The Water-Works department is managed with singular skill and prudence, and is more than self-supporting. The surplus accruing out of regular revenues, over all payments for construction, maintenance, the lawful percentage to sinking fund to provide for payment of all Water bonds at maturity, and payment of stated interest on said bonds, must be turned in to swell the sinking fund. This year a sum larger than three thousand dollars, in excess of all lawful requirements, has been so disposed of. Had the twelve thousand dollars, in round numbers, abated on request of the Finance Committee, assessable upon hydrants, and water for street watering, been added to the surplus, then over fifteen thousand dollars would have gone to sinking fund, *not now* to be applied to the payment of bonds,

but to lay beyond reach for general purposes, and to earn, probably, not to exceed three per cent. interest per annum. Twelve thousand dollars represents about twenty cents on each thousand dollars of taxable valuation, and this amount would necessarily be added, in making up the budget of appropriations. The tax rate, consequently, would be thus increased by twenty cents per thousand dollars. None of us desire this result.

There are probable and inevitable demands for public expenditures that sufficiently threaten an increased rate of taxation, without creating one that is unnecessary.

If the so-called gravel, which the Board thinks should be paid for, had any value as it existed in the bank at Fresh Pond, the pity is that it was not detained there. There are those who believe it will have cost the Street Department quite enough, as a gift, ere it is finally disposed of.

THE NO-LICENSE POLICY AGAIN APPROVED.

Overshadowing all other issues involved in the city election, was that relating to licensing the sale of intoxicating liquors,— and again, for the fourth consecutive year, the people of Cambridge have set the seal of condemnation upon the open saloon.

She has wisely escaped the degradation of willingly, and publicly, offering temptation to the young and weak, and to evil-disposed persons, more than sufficiently numerous in every community, and thus cultivating classes, idle, vicious and criminal, inimical in every way to the public peace and the common weal.

There are hundreds of little children now just beginning to tread the public streets, who have never seen an open

saloon in our beloved city. Will it not be difficult ever to persuade them either of the necessity, or the propriety of the existence of such places? It is safe to assume that most of them who may hereafter become voters will vote *No*. Let the year be far distant, if ever, that the saloon shall be restored in Cambridge.

CAMBRIDGE CEMETERY.

This trust has been handled by the Board of Commissioners with judicious care and well-directed judgment.

Much praise is due to the Superintendent for his careful and business-like administration of affairs, and for his zeal in promoting the plans and executing the work prescribed by the Commissioners.

OVERSEERS OF THE POOR.

This is another department deserving much commendation. The Board of Overseers is called upon to deal with questions novel in law, often difficult, sometimes vexatious, frequently appealing to the tenderest sensibilities, but all receiving that patient and painstaking investigation and determination, that alone would satisfy the worthy gentlemen who compose it.

The Warden and Matron of the Almshouse are peculiarly fitted to administer its affairs with most excellent judgment and discretion, and they have succeeded in establishing a higher moral tone, particularly noticeable in the youth, whose clean and healthy appearance and well-disciplined conduct, on the occasion of a recent visit, afforded the visitors very much gratification.

An interesting abstract from the Report of the Overseers follows:

OUTSIDE AID.

Expenditures	$32,386 15
Receipts	3,839 12
Net cost	$28,547 03

Histories of 512 new applicants have been taken during the year, 197 of whom have a legal claim upon Cambridge.

Two thousand four hundred and twenty-eight visits have been made upon the poor within the year.

Two hundred and ninety-six days have been passed in examining tax records.

The office is filled with valuable records and books, and is the best equipped office in the State.

Expenses have been greater this year on account of payment for coal for two years, under the new plan of the fuel committee of the city council. Have had more cases to pay for in the Cambridge, Carney, and Children's Hospitals, and for the twelve poor children supported in families outside of the almshouse.

It has been found necessary to employ additional clerical help at the office.

A new coal shed has been built on Norfolk Street to keep outside aid coal.

Have paid for more prisoners in the House of Correction.

The Overseers recommend the employment of an outside nurse, in accordance with the advice of Dr. Bryant, who shall work under his direction, attend the sick, prepare their diet, see that the medicine is taken by the patient, obtain from the office orders for supplies of food and nourishment, and exercise a general supervision in the sick cases. There are four nurses employed in Boston for this work.

There have been 6,154 histories of applicants for aid, taken since May, 1877, which are on file at the Overseer's office.

The assistant city physician has made 1875 visits to 620 different patients outside of the almshouse.

ALMSHOUSE.

Expenditures	$21,829 03
Receipts	909 04
Net cost	$20,919 99
Total number in the Almshouse during the year	304
Total number, Nov. 30, 1889	141
Average monthly number	139

One hundred and sixty-nine were admitted during the year. Five of these were children sentenced as neglected.

Fourteen boys have been sentenced as truants, mostly for a period of two years.

The assistant city physician has visited the almshouse 165 times, and made 1,182 professional calls on 119 sick persons therein.

There were nine patients in the almshouse hospital Nov. 30, 1889.

Overseers of Poor, Annual Report, Nov. 30, 1889.

OUTSIDE AID.

Four hundred and thirty-seven families have been aided from the office during the year, embracing 1,529 persons.

One hundred and nineteen insane persons have been supported by Cambridge at the State Lunatic Hospitals. Twenty-seven have been admitted during the year who are chargeable to Cambridge.

Department of Overseers of Poor, Nov. 30, 1889.

ALMSHOUSE.

The employment of boys in seating cane chairs has been continued.

Faithful instruction has been given by Miss Alice Fawcett to pupils of the almshouse school.

Sixty scholars have been present during the year, and thirty-seven present on Nov. 30, 1889.

Rev. F. W. Holland has continued his services as chaplain.

Expenditures	$21,829 03
Receipts	909 04

Net cost, $20,919 99, an increase of $1,367 45 over previous year.

FARM AND LEDGE.

There has been a great increase in products and advance in revenue.

Four paid employés, able bodied men, have been sent by the secretary to work on the ledge in return for groceries and fuel given them by the Overseers of Poor.

Expenditures	$4,661 30
Receipts	9,238 21

Leaving an excess of receipts of $4,576 91, an increase of $1,270 60 over the previous year.

HOUSE OFFAL.

Expenditures	$18,145 20
Receipts	7,324 61
Net cost	$10,820 59

A small increase from the previous year.

Appropriation by the City Council, as follows: —

Outside aid	$26,000 00
Almshouse	18,000 00
Offal	12,000 00
	$56,000 000

Estimated revenue —	
Outside aid	$4,000 00
Almshouse	8,000 00
Offal	6,500 00
	$18,500 00

RECAPITULATION.

Expenditures — Outside aid	$32,386 15
Receipts — Outside aid	3,839 12
Net cost	$28,547 03
Expenditures, Almshouse, Farm, Ledge	26,490 33
Receipts	10,147 25
Net cost	$16,343 08
Total expenditures, exclusive of house offal	58,876 48
Total Receipts	13,986 37
Net cost, care of the poor	$44,890 11

PAUPER DEPARTMENT ALMSHOUSE. DETAILS OF RECEIPTS.

For aid to burial and board of paupers	$274 84
Barrels	43 19
Discount on bills	2 86
Farm produce	3,671 03
Grease and bones	89 84
Proceeds of chair shop	479 28
Rags and old metals	7 88
Stone	5,567 18
Weighing fees	11 15
	$10,147 25

SEWER DEPARTMENT.

A recent ordinance requires the annual appointment of a Superintendent of Sewers, who, being subordinate to the City Engineer, shall have the active supervision of this essential and important work. The appointee has proved a faithful and active officer, of good judgment, and well-founded practical ability.

Length of sewers previously constructed, 81 miles.
Built during the year . . . . . $2\frac{8}{10}$ "

The Bath Street system, from Linnaean Street to the Charles River, has been completed, at a total cost of $32,071.60. Length, 6,493$\frac{3}{10}$ feet. Another extensive and expensive system, the Belmont, has been carried to a point between Holworthy and Cushing Streets, the former now being sewered its entire length.

Needed repairs have been made upon the delivery end of the Binney Street sewer, through the marsh land, at an expense of $2,852.80. The cost of dredging and cleaning at outlet of the Bridge Street sewer was $2,620.55, five-ninths of which amount has been paid by the city of Somerville.

It is understood that working plans, in detail, are being prepared by the Commissioners of the Metropolitan System of Sewerage, in which Cambridge is deeply concerned, and that a large working force will be employed this spring.

DEPARTMENT OF CITY ENGINEERING.

The high standard of excellence to which this absolutely necessary department had been raised by his predecessors, has been worthily maintained by its new chief, who has brought to his position the experience of many years, added to natural inclinations and a mathematical genius, qualifying him to grasp quickly, and with successful professional skill, any problem in engineering that may, in connection with the city's work, be presented to him.

He is supported and assisted in the most faithful and competent manner by a corps of draughtsmen and aids, who, by their polite attention, and willingness to promote the objects sought by enquiring citizens, contribute their

share towards making this office first-class in every particular.

The City Engineer says: "The calls upon the office for plans, information, and advice, by the various departments, committees, and the public, have been incessant."

Of work performed outside the office, some idea may be gathered from the following statement:

For Street Department, street lines given	65
" " " " grades given	40
" " " cars of cracked stone measured	324
" " " number of streets where curbing, etc., was measured	65
Street lines given, on application of private parties	288
" grades	193
Number of houses measured	656
Plans and profiles for sewers	40
" " " " streets	96
Surveys at cemetery	13
Miscellaneous surveys, profiles, levels, etc.	260

The time of one assistant has been largely occupied with the accounts and pay-rolls of the sewer department.

Disbursements of the office $8,651.48.

LAMP DEPARTMENT.

There has been a radical extension of the system of electric street lighting, so that every section of the city is fairly well covered. Additions, to fill spaces not now well lighted, are in contemplation.

Electric lighting for past year has cost	$20,941 77
Gas " " " " " "	13,695 20
Salary of superintendent, pay roll of employés, lighters, and workmen, sundry expenses, repairs, etc.	10,367 56
	$45,004 53

Increase over 1888, $3,618.37.

There are 113 arc, and 180 incandescent lights in service every and all night. 13 of the former and 141 of the latter have been added within the past year.

The committee has spent a great deal of time in arranging locations for lights, so as to render the best service to the people. The general business of the department has been conducted with promptness and fidelity by its superintendent.

NEW PUBLIC LIBRARY.

Early in the year, the Board of Trustees organized under a new and well-devised code of Rules and Regulations, requiring the selection of necessary officers and sub-committees, viz., President, Secretary, and Committees on Library, on Books, and on Finance, and prescribing their duties. Business methods therefore prevail, to the satisfaction of all concerned.

One has only to visit the Library during the hours established for serving the public, 10 A. M., until 8 P. M., to be convinced of its usefulness and importance; nor will he fail to recognize and appreciate the far-sighted liberality that called it into its present charming existence.

The report of the Trustees is an unusually interesting and valuable public document, and will well repay perusal, as will the statistical report of the amiable and accomplished librarian, which accompanies it.

NEW CITY HALL.

Unflagging interest has been manifested by our citizens generally, in the progressive stages of erection as they have been rapidly developed at this building. Within twelve months, it is more than probable, construction will have been completed, and the public offices therein comfortably established.

It will afford you gratification to learn of the intended visit of Frederick H. Rindge, whose generosity furnishes this, and the Public Library building to the City of Cambridge, to his old home during next September, after an absence of several years.

THE AUSTRALIAN PLAN.

It is marvellous that a complete revolution in the manner of voting at elections should have been effected so thoroughly, so peacefully, and with such entire success and satisfaction. The comfort of the voter in the act of deliberately exercising the highest privilege of citizenship, has been absolutely secured. Some slight modifications in the law may have been suggested by the experience of the two late elections, but that this new system in its important provisions has come to stay, cannot be doubted. The benefits and advantages secured, entirely overlay any objections arising on account of somewhat larger expenses.

EXCELLENT PRECINCT OFFICERS.

The triumphant success of the new system in elections is largely due to the gentlemanly, intelligent, and faithful performance of an exacting and tedious duty by the large number of precinct officers. That their selection was made with care and discretion, is proven by the correct and extremely satisfactory returns made by them to the

CITY CLERK.

To this capable, active, and ingenious public officer, is due unqualified praise. No detail of arrangement required

by law escaped his keen observation, and to his clear and explicit analysis of the law, and instructions to the precinct officers, was added careful personal supervision by visitations to every precinct on the days of election, accompanied, through his courtesy, by the Mayor.

CITY GOVERNMENT.

The experience of old and large cities in Europe, proves that centralization of power in the executive, to a wider extent than prevails with us, combined with longer official terms of service, will secure, other things being equal, very much more satisfactory results.

Being in accord with the views expressed by Ex-Mayor Seth Low, of Brooklyn, N. Y., on a recent occasion, and believing his statements to be worthy of deliberate study and preservation, they are subjoined:

"I believe it is perfectly possible," he said, "for a great deal of improvement to be brought about in our city governments, under precisely the conditions which prevail in all our large cities. If the results are not good and can be corrected, then it is not the form of government with which we should find fault, but our administration of it. If we start with this idea, and with the further idea that improvement is very desirable in the government of all our cities, we have made the first great step toward reaching good government. Our ancestors of the New England towns were afraid of lodging too much power in the hands of any one officer; but when those towns became large, the conditions changed. In the city, none of us, for example, look to the city to protect us in our rights as citizens; we look to the State, or to the United States, as you do in Boston in your

police affairs. We have thus passed beyond the fear our ancestors had of lodging power in the hands of a single officer. And I want to ask you who conduct factories, whether you could make your business succeed by putting each floor in charge of a Board of Commissioners. Our government gives charge of the post-office to one man, and has single heads for other departments. *There is no administration so feeble as an administration by committee.* Our practice in Brooklyn is to give executive work to one head, and work where discretion is needed, to a board. Thus we give administration of police affairs to a single man, but when licenses are to be issued, we call in two other commissioners. Under the Brooklyn system we have avoided a great many troubles, and have had greatly improved government. Another point is — you must give the Mayor power to make his influence felt in every department of the city government — power to remedy any defect by change of the head of the department, and then you must weight him with full responsibility for the work he does. The Mayor should have the power of appointment and the power of removal, for these, I hold, are essential to any system of good government in cities. Before we bewail the inefficiency of the city governments much more in this country, we had better try to organize them along the business line of responsibility, from the top down. Rather than change the methods in your factory to the methods of your city, I would suggest that the better plan is to change the methods of your city to the methods of your factory."

The Mayor is glad to testify to the zeal, constancy and fidelity of the several heads of departments, being espec-

ially indebted, to the City Clerk, the Treasurer, the Auditor, City Solicitor, and the Clerk of Committees. For valuable services rendered by the Hon. Board of Assessors, City Engineer, the Inspector of Buildings, the Health Officer, Water Registrar, Assistant City Physician, our genial City Messenger, the Commissioner of Bridges, Superintendent of Water Works, Superintendent of Streets, Assistant City Clerk, and their various assistants; the President of the Board of Aldermen, and Chairmen of various committees, he herewith tenders his respectful acknowledgments.

The occasion must not pass without reference to the public loss sustained by the recent decease of the Honorable J. Warren Merrill, and the Honorable Hamlin R. Harding, both ex-mayors of Cambridge. The record of their public services is incorporated in the history of Cambridge, and by their relicts and descendants must be dearly cherished.

Early in the past year, City Engineer, William S. Barbour, a meritorious city official, beloved by all his associates, passed on to a higher life.

IN CONCLUSION.

I confidently trust, and the people have a right to expect, that we shall at all times and under all circumstances, during our term of service, with unanimity and fortitude, support the rights, interests, and honor of this good city of Cambridge.

ANNUAL REPORT

OF THE

AUDITOR OF ACCOUNTS,

FOR 1889.

CITY OF CAMBRIDGE,
AUDITOR'S OFFICE, Dec. 31, 1889.

To the Honorable City Council:

GENTLEMEN,— In conformity with the requirements of the City Ordinances, the undersigned herewith presents the forty-third Annual Report of the Receipts and Expenditures of the City of Cambridge for the year ending Nov. 30, 1889, exhibiting the same as classified in the several department accounts, also a statement of the funded and temporary loans, the rates of interest thereon, together with such other information as may possess general interest.

Respectfully submitted,

HARRY T. UPHAM,
Auditor.

Balance in the Treasury, Nov. 30, 1888, . .		$146,104 02
Receipts from all sources, from Dec. 1, 1888, to Nov. 30, 1889, were as follows: —		
From City Department accounts .	$125,398 90	
Water Department Accounts	239,744 15	
Betterments (extension of Washington Avenue) .	1,026 00	
Amounts carried forward, .	$366,169 05	$146,104 02

Amounts brought forward, .	$366,169 05	$146,104 02
From Cemetery Fund (amount received for "perpetual care of lots") . . .	2,214 50	
Commissioners of Sinking Funds	100,000 00	
Loans (Funded and Temporary)	655,000 00	
Notes Receivable (Mortgage notes)	1,600 00	
Sale of City Lands . .	2,457 47	
Taxes	1,056,295 18	
Tax, Corporation . .	53,775 05	
Tax, National Bank . .	16,447 65	
Tax Lien	357 28	
Tax Sale Surplus . .	58 72	
Trustees of Sinking Fund of Water Works . .	112,000 00	
Total Receipts	————	2,366,374 90
		$2,512,478 92

The Payments have been as follows: —

For City Department Accounts .	1,298,604 44	
Water Department Accounts .	264,341 69	
Abatements (Taxes) . .	20,722 71	
Cemetery Fund (Invested) .	2,214 50	
Loans (Funded and Temporary).	702,000 00	
Tax, County	48,004 79	
Tax, National Bank . .	7,006 48	
Tax, State	61,920 00	
Total Payments	————	$2,404,814 61
Balance in the Treasury Nov. 30, 1889 . .		$107,664 31

The balance in the Treasury, Nov. 30, 1889, amounting to $107,664.31, is subject to drafts upon the following accounts, viz : —

Bond accounts,—		
Harvard Bridge		29,034 13
Street Department, extension and widening of Front Street		4,776 55
Street Department, filling and grading of Front Street		6,521 97
Street Department, widening of Brattle St.		2,499 36
Water Works, Fresh Pond Land		727 97
Water Works, Stony Brook Additional Supply		11,346 50
		$54,906 48
Contracts,—		
Putnam Schoolhouse	$30,600 00	
Sixth Street Bridge	3,100 00	
		$33,700 00
Street Extensions and Widenings,—		
Charles River Street	1,000 00	
Main Street	1,659 00	
		$2,659 00
		$91,265 48
Leaving a net balance of		16,398 83
		$107,664 31

The payments considered extraordinary, and not included in the annual estimates of expenses, were as follows,—

Land for Schoolhouse in Ward Four	$6,000 00
New High Schoolhouse	4,654 35
	$10,654 35

There has been an addition to the City Funded Debt, during the year, of $145,000.00, caused by the issue of coupon and registered bonds, as follows: —	
Bridge Loan, dated March 1, 1889, payable in thirty years, at an annual interest of four per cent. (Harvard Bridge)	$90,000 00
Bridge Loan, dated March 1, 1889, payable in thirty years, at an annual interest of four per cent. (Filling and grading Front Street, as an Avenue to the Harvard Bridge) . . .	25,000 00
Sewer Loan, dated Nov. 1, 1889, payable in twenty years, at an annual interest of four per cent. (Trunk Sewers in Bath Street and Belmont Districts)	22,000 00
Street Widening Loan, dated Nov. 1, 1889, payable in ten years, at an annual interest of four per cent. (Widening Brattle Street) . .	8,000 00
	$145,000 00
Of the City Funded Debt, there have matured, during the year, City Loan Bonds amounting to	$100,000 00
Increase in City Debt	$45,000 00
There has been an addition to the Water Debt of the City, during the year, of $20,000.00, caused by the issue of coupon and registered bonds, payable in twenty years, at an annual interest of four per cent. (Stony Brook Additional Water Supply)	$20,000 00
Of the Water Debt of the City, there have matured, during the year, bonds, amounting to .	$112,000 00

BALANCE SHEET, DECEMBER 1, 1889.

TITLES OF ACCOUNTS.	DR.	CR.
City Debt Contingent		$200,000 00
City Land	$14,612 59	
City of Cambridge	2,234,941 78	
City Treasury	107,664 31	
Commissioners of Sinking Funds	483,060 78	
Daniel White Charity Fund		5,000 00
Dowse Institute Fund		10,000 00
Loan, Cambridge Cemetery		65,000 00
Loan, City		170,000 00
Loan, City Hall Land		83,000 00
Loan, Harvard Bridge		325,000 00
Loan, Land		10,000 00
Loan, Municipal		200,000 00
Loan, Paving		255,000 00
Loan, Sewer		701,000 00
Loan, Street		13,000 00
Loan, Street Widening		122,000 00
Loan, Water		1,154,200 00
Loan, Water, Registered,		477,500 00
Notes Receivable	175 00	
Sanders Temperance Fund		10,000 00
Surrendered Estates	76,239 99	
Taxes, 1885	9,186 35	
" 1886	9,512 65	
" 1887	11,974 50	
" 1888	12,690 50	
" 1889	94,913 70	
Tax Liens	17,128 04	
Tax Sales, Surplus		58 72
Trustees of Sinking Funds of Water Works	728,658 53	
	$3,800,758 72	$3,800,758 72

THE FUNDED CITY DEBT.

Following is a statement of the total Funded Debt of the City, with the dates of maturity and rates of interest thereon: —

BRIDGE LOAN.

Due Oct. 1, 1917,	int.	4	per cent.,	30	yrs.	$10,000
July 1, 1918,	"	4	"	30	"	100,000
Sept. 1, 1918,	"	4	"	30	"	100,000
Mch. 1, 1919,	"	4	"	30	"	115,000
						$325,000 00

CITY LOAN.

Due July 1, 1890,	int.	6	per cent.,	20	yrs.	$20,000
Jan. 1, 1893,	"	5	"	30	"	150,000
						$170,000 00

LAND LOAN.

Due July 1, 1893,	int.	6	per cent.,	20	yrs.	$10,000
Aug. 1, 1898,	"	4	"	10	"	83,000
						$93,000 00

PAVING LOAN.

Due July 1, 1893,	int.	6	per cent.,	20	yrs.	$100,000
July 1, 1894,	"	6	"	20	"	130,000
July 1, 1895,	"	6	"	20	"	25,000
						$255,000 00

SEWER LOAN.

Due Oct. 1, 1895,	int.	6	per cent.,	20	yrs.	$20,000
July 1, 1896,	"	6	"	20	"	29,000
July 1, 1903,	"	6	"	30	"	136,000
July 1, 1904,	"	6	"	30	"	295,000
July 1, 1905,	"	6	"	30	"	144,000
Nov. 1, 1896,	"	$3\frac{1}{2}$	"	10	"	25,000
Nov. 1, 1907,	"	4	"	20	"	30,000
Nov. 1, 1909,	"	4	"	20	"	22,000
						$701,000 00

STREET LOAN.

Due July 1, 1893,	int.	6	per cent.,	20	yrs.	$13,000 00
Amount carried forward,						$1,557,000 00

Amount brought forward,						$1,557,500 00

STREET WIDENING LOAN.

Due Nov. 1, 1899,	int. 4	per cent.,	10	yrs.	$8,000	
July 1, 1903,	" 6	"	30	"	10,000	
July 1, 1904,	" 6	"	30	"	90,000	
July 1, 1905,	" 6	"	30	"	14,000	
						$122,000 00

MUNICIPAL LOAN.

Due April 1, 1895,	int. 4	per cent.,	10	yrs.		$200,000 00

CAMBRIDGE CEMETERY LOAN.

Due Aug. 1, 1905,	int. 4	per cent.,	20	yrs.		$65,000 00
Total Funded City Loan						$1,944,000 00

THE FUNDED WATER DEBT.

Due July 1, 1890,	int. 6	per cent.,	20	yrs.	$60,000	
May 1, 1891,	" 6	"	20	"	50,000	
July 1, 1892,	" 6	"	20	"	335,000	
April 1, 1894,	" 6	"	20	"	150,000	
Nov. 1, 1894,	" 4	"	10	"	36,000	
April 1, 1895,	" 6	"	20	"	160,000	
July 1, 1896,	" 6	"	20	"	103,000	
July 1, 1897,	" 6	"	20	"	16,000	
July 1, 1898,	" 5	"	20	"	12,500	
May 1, 1910,	" 4	"	25	"	288,000	
April 1, 1911,	" $3\frac{1}{2}$	"	25	"	100,000	
July 1, 1911,	" $3\frac{1}{2}$	"	25	"	75,000	
Nov. 1, 1906,	" $3\frac{1}{2}$	"	20	"	43,000	
Oct. 1, 1907,	" 4	"	20	"	75,000	
Oct. 1, 1907,	" 4	"	20	"	15,000	
Nov. 1, 1907,	" 4	"	20	"	22,000	
July 1, 1908,	" 4	"	20	"	46,000	
Aug. 1, 1908,	" 4	"	20	"	25,000	
July 1, 1909,	" 4	"	20	"	20,000	
Total Funded Water Debt						$1,631,500 00

RECAPITULATION.

Amount of funded City Loan upon which interest is at 6 per cent.	$1,036,000 00
Amount of funded City Loan upon which interest is at 5 per cent.	150,000 00
Amount of funded City Loan upon which interest is at 4 per cent.	733,000 00
Amount of funded City Loan upon which interest is at $3\frac{1}{2}$ per cent.	25,000 00
	$1,944,000 00

Amount of Water Loan upon which interest is at 6 per cent.	$874,000	
Amount of Water Loan upon which interest is at 5 per cent.	12,500	
Amount of Water Loan upon which interest is at 4 per cent.	527,000	
Amount of Water Loan upon which interest is at $3\frac{1}{2}$ per cent.	218,000	
		$1,631,500 00

Temporary loans for the past ten years, and interest paid upon the same: —

Year.	Temporary Loan.	Interest paid upon the Loan.
1880	$350,000	$6,660 94
1881	575,000	9,933 48
1882	525,000	9,720 05
1883	600,000	14,880 25
1884	540,000	15,795 37
1885	300,000	13,790 52
1886	450,000	5,653 83
1887	555,000	9,222 24
1888	400,000	9,497 36
1889	490,000	5,919 54

The following is a statement of the temporary loans negotiated during the year and the rates of interest on the same: —

City Notes, dated	Jan. 25, 1889,	$50,000	int.	3⅝	per cent.,	payable	Oct.	10,	1889.
"	" Feb. 9, "	50,000	"	3⅜	"	"	"	11,	"
"	" April 1, "	50,000	"	3⅛	"	"	"	11,	"
"	" May 1, "	100,000	"	2⅝	"	"	"	12,	"
"	" July 1, "	40,000	"	2⅞	"	"	"	12,	"
"	" " 10, "	25,000	"	3⅜	"	"	"	12,	"
"	" " 13, "	50,000	"	3⅛	"	"	"	12,	"
"	" Aug. 1, "	50,000	"	3⅛	"	"	"	12,	"
"	" Aug. 22, "	75,000	"	3½	"	"	"	12,	"
		$490,000							

BORROWING CAPACITY.

The borrowing capacity of the City, on Dec. 1, 1889, is as follows: —		
Net funded City Debt		$1,460,939 22
Average valuation for 1887, 1888, and 1889, $61,333,447 29.		
2½ per cent. on the same .	$1,533,336 18	
Leaving a margin of . .		72,396 96
	$1,533,336 18	$1,533,336 18
		$72,396 96
To which may be added the exemption allowed by the Legislature on account of the Harvard Bridge . . .		$200,000 00
Borrowing capacity for 1890 . . .		$272,396 96

THE CITY LIABILITIES.

Funded City Loan	$1,944,000 00
Contingent Loan, being a City Note to the Trustees of the Sinking Funds of the Water Works	200,000 00
Trust Funds	25,000 00
Gross City Liabilities	$2,169,000 00

THE CITY ASSETS.

Cash in Treasury	$107,664 31
City Property (estimated)	1,500,000 00
Sinking Funds	483,060 78
Taxes and Miscellaneous Bills	168,854 95
Gross City Assets	$2,259,580 04

SINKING FUNDS.

Amount of Fund, Nov. 30, 1888		$499,968 28
RECEIVED.		
From City Treasurer, being the amount appropriated by the City Council to be derived from taxation	$65,435 00	
Premiums and Interest accumulations	17,657 50	
		83,092 50
		$583,060 78
EXPENDED.		
For City Loan Bonds, maturing April 1, 1889		$100,000 00
Amount of Fund Nov. 30, 1889		$483,060 78

WATER WORKS DEBT.

	1888.	1889.
Funded Water Loan	$1,723,500 00	$1,631,500 00
Less Sinking Fund	753,942 00	728,658 53
	$969,558 00	$902,841 47
Decrease of the net water debt from last year		66,716 53
	$969,558 00	$969,558 00
The Water Works are valued at about their cost, viz.		$2,500,000 00

WATER WORKS SINKING FUND.

Amount of Fund, Nov. 30, 1888		$753,942 00
RECEIVED.		
From City Treasurer for amount due and appropriated from the revenue of the Water Works	$51,705 00	
also the surplus revenue . .	3,312 10	
Premiums and interest accumulations	31,699 43	
		86,716 53
		$840,658 53
EXPENDED.		
For Water Bonds, matured May 1, 1889		112,000 00
Amount of Fund, Nov. 30, 1889		$728,658 53
Decrease from last year		$25,283 47

CEMETERY FUND.

Amount of Fund, Nov. 30, 1888		$13,559 23
RECEIVED.		
For perpetual care of lots in Cambridge Cemetery . . .	$2,214 50	
Interest accumulations . .	473 86	
		2,688 36
		$16,247 59

This fund is held in trust by the Committee on Finance and is invested as follows: —		
Cambridge Bonds . . .	$11,000 00	
Cash in Cambridge Savings Banks	5,247 59	
		$16,247 59

THE TRUST FUNDS

Assumed by the city are held by trustees, and interest is paid upon them at the rate of six per cent. annually as follows: —

Name of Fund.	Amount.	Interest.
Daniel White, Charity	$5,000	@ 6 % 300 00
Dowse Institute Fund	10,000	@ 6 % 600 00
Sanders Temperance Fund	10,000	@ 6 % 600 00
	25,000	1,500 00

TAXES.

The amount of taxes assessed by the Board of Assessors, on the real and personal estates and polls of Cambridge, for the year 1889, was as follows: —

Valuation of real estate	$50,324,175 00
Valuation of personal estate	14,960,100 00
	$65,284,275 00

Assessed at $16.00 per $1,000 gives	$1,044,548 40
18,264 polls, at $2.00	36,528 00
174 polls of women, at .50 each	87 00
Bank stock (non-resident separately assessed)	6,339 20
	$1,087,502 60

This tax is divided as follows: —

For City purposes*	$931,450 00
County assessments	48,004 79
Overlay	37,266 01
State assessments	61,920 00
State charge for non-resident bank stock	6,339 20
Additional assessments	2,522 60
	$1,087,502 60

*To meet the city expenses, the income from various departments is added to this sum raised by taxation.

Increase in the number of polls since last year, 220¾.

220¾ polls at $2.00	$441 50
Increase in real estate valuation	1,903,575 00
Increase in personal valuation	663,360 00
	$1,567,376 50
Decrease in valuation by abatements	1,295,169 38
Gain in valuation since last year	$272,207 22

Number of houses in 1889	10,222
Number of houses in 1888	9,927
Number of houses built during the past year	295

Number of horses assessed	4,607
Number of cows assessed	482
Number of swine assessed	81

Statement of the valuations of the personal property and real estate of the City of Cambridge, with the number of polls, dwellings, and rate of taxation for the past ten years: —

Year.	Polls.	Personal.	Real Estate.	Total.	Dwellings.	Rate per $1000
1880	12,644	$11,699,660	$37,929,400	$49,629,060	8,165	16 00
1881	13,67[illegible]	12,401,390	38,691,900	51,093,290	8,331	16 00
1882	13,922	11,577,080	39,091,200	50,668,280	8,489	16 60
1883	14,870	11,975,640	39,821,700	51,797,340	8,572	16 40
1884	15,399¼	12,259,491	41,289,200	53,548,691	8,781	16 80
1885	16,036	12,758,255	42,588,300	55,346,555	9,106	15 50
1886	16,534½	14,490,470	44,955,200	59,445,670	9,398	15 00
1887	17,139¼	13,358,910	46,344,700	59,703,610	9,761	16 00
1888	18,086¾	14,296,740	48,420,600	62,717,340	9,927	15 00
1889	18,307½	14,960,100	50,324,175	65,284,275	10,222	16 00

Abatement and discounts upon taxes for the past ten years, and amount of tax uncollected Dec. 1, 1889 : —

Year.	Total Tax.	Total Abatement.	Total Discounts.	Amount of tax uncollected Dec. 1, 1889.
1880	$826,079 23	$17,142 79	$28,383 13	
1881	850,730 61	12,958 90	30,029 45	
1882	873,793 41	12,230 20	30,783 78	
1883	885,938 96	14,784 62	31,188 00	
1884	937,938 64	11,210 31	32,926 83	
1885	895,012 06	14,174 11	32,781 78	$ 9,186 35
1886	930,228 50	17,497 00	32,532 57	9,512 65
1887	995,964 90	15,443 74	26,054 53	11,974 50
1888	982,829 50	21,667 20	25,366 53	12,690 50
1889	1,087,502 60	20,722 71	28,081 09	94,913 70
				$138,277 70

Net valuation for three years : —

Year.	Total Valuation.	Abatement.	Net Valuation.
1887	$59,703,610	$965,233 75	$58,738,376 25
1888	62,717,340	1,444,480 00	61,272,860 00
1890	65,284,275	1,295,169 38	63,989,105 62
	$187,705,225	$3,704,883 13	$184,000,341 87
		3	$184,000,341 87

Net valuation for 1887, 1888 and 1889 . . $61,333,447 29

Assessed at $12.00 per 1,000 gives . $736,001 36
which is the legal limit of taxation for municipal purposes for 1890.

ABATEMENTS, TAXES.

No Appropriation was made for Abatements this year, as the Assessors allow in the Overlay an amount sufficient to cover the same.

The Overlay for 1889 was	$37,266 01
The Amount of Abatements was . . .	20,722 71
Balance available for City Purposes .	$16,543 30

ESTIMATED RECEIPTS.

Statement of the estimated receipts for the fiscal year ending Nov. 30, 1889, submitted to the City Council in February, 1889, and the actual receipts: —

TITLES OF ACCOUNTS.	ESTIMATED.	ACTUAL.	INCREASE.	DECREASE
Bridges, W. B. C. and P. P. . .	400 00	425 45	25 45	
Cambridge Cemetery	14,000 00	17,206 26	3,206 26	
Cambridge Public Library . .	4,000 00	3,936 84		63 16
City Buildings, care and repairs.	2,000 00	1,992 84		7 16
Fire Department	200 00	421 69	221 69	
Incidental Expenses	4,000 00	4,592 99	592 99	
Interest	3,000 00	4,477 05	1,477 05	
Pauper Dep't, Almshouse . .	8,000 00	10,147 25	2,147 25	
House offal . .	6,500 00	7,324 61	824 61	
Outside aid . .	4,000 00	3,839 12		160 88
Police Department	5,000 00	4,873 23		126 77
Salaries	1,500 00	1,500 00		
School Department, Salaries .	1,000 00	1,015 48	15 48	
Text Books and Supplies,	300 00	254 70		45 30
Sewers, Construction	17,000 00	14,273 17		2,726 83
Maintenance	1,900 00	2,001 85	101 85	
State Aid	11,500 00	10,065 50		1,434 50
Street Department, Paving . .	6,000 00	2,928 03		3,071 97
Repairs . .	2,000 00	8,380 25	6,380 25	
Watering .	12,000 00	12,337 64	337 64	
Water Works, Rates, Fines, &c.	224,560 00	227,365 51	2,805 51	
Supplies . . .	5,000 00	8,095 57	3,095 57	
Corporation Tax	50,000 00	53,775 05	3,775 05	
National Bank Tax	11,000 00	9,441 17		1,558 83
Uncollected Taxes for 1888 and previous years	60,000 00	63,706 28	3,706 28	
Sale of City Lands	2,500 00	2,457 47		42 53
" " Mortgage Notes . . .	500 00	1,600 00	1,100 00	
	457,860 00	478,435 00	29,812 93	9,237 93
Increase	20,575 00			20,575 00
	$478,435 00	478,435 00	29,812 93	29,812 93

The unestimated receipts amounted to $18,929.02, and were credited to the following accounts:—

Betterments (for street extension)	1,026 00
Bridge, Harvard (premium on bonds)	9,719 10
Engineering (sundry receipts)	91 00
Lighting streets (sundry receipts)	250 73
School Houses, care and repairs (sundry receipts),	141 79
Sewers, construction, Bath Street " "	54 23
Sewers, construction, Belmont " "	5 25
Stationery and printing " "	30 10
Street Department, —	
Filling and grading Front Street (premium on bonds)	2,699 75
Widening Brattle Street (premium on bonds),	412 00
Tax lien account (tax sale)	357 28
Tax sale, surplus (surplus receipts)	58 72
Water Works, construction (sundry receipts)	599 41
Fresh Pond land (sundry receipts),	645 00
Stony Brook (premium on bonds, &c.	1,973 66
Interest (accrued interest)	298 00
Maintenance, (sundry receipts)	567 00
	$18,929 02

EXPENDITURES.

Statement of the expenditures for the fiscal year 1888–89, showing the increase or decrease from the amount appropriated by the City Council, March 13th, 1889:—

Titles of Accounts.	Estimated expenses.	Actual expenses.	Increase.	Decrease.
Bridge (Harvard)	$132,759 07	$113,444 04		$19,315 03
B'dg's. (W. Boston, Craigie's and Prison Pt.	11,000 00	7,779 25		3,220 75
Cambridge Cemetery: —				
Current Expenses	14,000 00	15,988 17	$1,988 17	
Old Burial Ground, Ward One	300 00	300 00		
Cambridge Public Library	9,500 00	9,490 17		9 83
City Buildings (Care and Repairs)	12,000 00	12,594 60	594 60	
Discounts (Taxes)	27,000 00	28,081 09	1,081 09	
Engineering	9,000 00	8,651 48		348 52
Fire Department	55,000 00	55,559 57	559 57	
Health Department	3,500 00	2,989 67		510 33
Incidental Expenses	45,000 00	31,219 04		13,780 96
Interest	120,000 00	114,755 54		5,244 46
Lighting Streets	47,000 00	45,004 53		1,995 47
Amounts Carried forward,	$486,059 07	$445,857 15	$4,223 43	$44,425 35

EXPENDITURES — *Continued.*

Amounts brought forward, . .	$486,059 07	$445,857 15	4,223 43	$44,425 35
Pauper Department: —				
Almshouse	26,000 00	26,490 33	490 33	
House Offal	18,500 00	18,145 20		354 80
Outside Aid	30,000 00	32,386 15	2,386 15	
Police Department	87,000 00	87,400 68	400 68	
Salaries	27,850 00	27,916 67	66 67	
School Department: —				
Incidental Expenses	700 00	665 34		34 66
Salaries	183,000 00	184,776 26	1,776 26	
Text-Books and supplies . . .	13,000 00	12,940 85		59 15
School Houses: —				
Care and Repairs	37,000 000	36,089 32		910 68
New and Furniture (New High School)		4,654 35	4,654 35	
New and Furniture (Putnam School House Completion)	30,000 00	14,400 00		15,600 00
New and Furniture (Peabody School House)	21,716 26	21,716 00		26
Land for School House, Ward Four .		6,000 00	6,000 00	
Sewer Department: —				
Construction (Bath Street Sewer System)	15,106 35	9,868 95		5,237 40
Construction (Belmont Sewer System)	2,000 00	4,038 48	2,038 48	
Construction (Front and Albany Street Sewer)	5,000 00	4,114 90		885 10
Construction (Sundry Sewers) . .	25,000 00	29,138 70	4,138 70	
Maintenance	20,000 00	19,533 96		466 04
Sinking Funds	65,435 00	65,435 00		
State Aid	13,500 00	13,585 68	85 68	
Stationery and Printing	5,000 00	4,435 85		564 15
Street Department: —				
Bridges	8,000 00	3,531 89		4,468 11
Building Sea-Wall on Charles River near Mill Pond	1,850 35	2,001 02	150 67	
Extension of Charles River Street .	1,000 00	.....		1,000 00
Extension of De Wolfe Street . .	1,600 00	1,583 00		17 00
Extension of Washington Avenue .		1,670 00	1,670 00	
Extension and Widening of Front Street	19,011 55	14,235 00		4,776 55
Filling and Grading of Front Street .	25,000 00	21,177 78		3,822 22
North River Flagging Stone . . .	1,500 00	1,500 00		
Paving Broadway (Main St. to Brewery)	21,000 00	21,331 29	331 29	
Paving Sundry Streets (Edgestones and Sidewalks)	15,000 00	14,777 97		222 03
Repairs and Collecting Ashes . .	112,000 00	118,718 19	6,718 19	
Shade Trees and Public Grounds . .	4,500 00	4,514 68	14 68	
Watering (Sundry Streets) . . .	18,000 00	15,067 41		2,932 59
Widening Brattle Street	6,000 00	5,912 64		87 36
Widening Inman Street	1,450 00	250 00		1,200 00
Widening Main Street	4,402 75	2,743 75		1,659 00
Water Works: —				
Construction	35,000 00	35,599 41	599 41	
Construction (additional) . . .		6,237 23	6,237 23	
Construction (Fresh Pond Land Account)	1,268 78	2,686 06	1,417 28	
Construction (Stony Br'k Water Supply)	15,403 23	26,030 39	10,627 16	
Interest	86,855 00	84,735 00		2,120 00
Maintenance	45,000 00	42,603 20		2,396 80
Rates, Fines, etc.		.....		
Rates, Fines, etc. (Abatements) . .	3,500 00	3,866 91	366 91	
Rates, Fines, etc. (Refunds) . . .	2,500 00	1,628 90		871 10
Sinking Funds	51,705 00	51,705 00		
Sinking Funds, Surplus Receipts . .		3,312 10	3,312 10	
Supplies	4,800 00	5,897 67	1,097 67	
Supplies (Abatements)	200 00	39 82		160 18
Allowance for uncollected of 1889. .	80,000 00	94,913 70	14,913 70	
	$1,678,413 34	$1,657,859 83	$73,717 02	$94,270 53
Decrease in actual expenses from estimated expenses.		20,553 51	20,553 51	
	$1,678,413 34	$1,678,413 34	$94,270 53	$94,270 53

Transfers.

The following transfers were made from the appropriations mentioned, to make up deficiencies occurring in the appropriations to which the transfers were made, viz.:

From the appropriation for	Amounts.	To the appropriation for	Amounts.
Bridges, W. B., C., & P. P.	$2,000 00	Cambridge Cemetery	$2,000 00
Cambridge Cemetery	2,000 00	School Dept., Salaries	2,000 00
Incidental Expenses	10,375 23	Discounts, Taxes	1,100 00
		Fire Dept.	337 88
		Police Dept.	400 68
		Salaries	66 67
		School House Land, Ward 4	6,000 00
		State Aid	500 00
		Shade Trees and Public Gr'nds	300 00
		Street Department, Extension of Washington Avenue	1,670 00
		Pauper Dept., Outside Aid	1,586 15
Pauper Dept., Almshouse	1,586 15	Pauper Dept., Outside Aid	800 00
Pauper Dept., House Offal	800 00	City Buildings, Care and Repair	1,000 00
School Houses, Care and Repair	1,000 00	Sewers, Construction	4,143 50
Sewers, Construction, Bath St.	5,291 63	Sewer, Construction, Belmont	1,148 13
Sewer Construction Front St.	885 10	Sewer, Construction, Belmont	885 10
Street Dept., Widening Inman Street.	1,150 00	Street Dept., Paving Broadway	350 00
Street Dept., Repairs	150 67	Street Dept., Repairs	800 00
Water Works, Maintenance	1,500 25	Street Dept., Building Sea Wall	150 67
		Water Works, Fresh Pond Land	1,500 25
Totals	$26,739 03		$26,739 03

APPROPRIATIONS AND EXPENDITURES.

THE AMOUNT OF THE SEVERAL APPROPRIATIONS MADE BY THE CITY COUNCIL DURING THE YEAR — THE TRANSFERS FROM ONE APPROPRIATION TO ANOTHER — THE EXPENDITURES IN DETAIL UNDER EACH APPROPRIATION, AND THE UNEXPENDED BALANCES NOV. 30, 1889.

BRIDGE, HARVARD.

Appropriation	$132,759 07
Surplus Receipts	9,719 10
	$142,478 17

RECEIVED.

For premium on bonds . .	$9,719,10

(The expenses of the Harvard Bridge are divided equally between the cities of Boston and Cambridge, and these amounts represent the amounts paid by Cambridge.)

EXPENDED.

For Advertising	$31 60	
Architects, Walker & Best . .	50 00	
Ballast for abutments . .	273 56	
Carriage hire, messengers, car fares, etc.	20 58	
Castings and ironwork . .	952 42	
Contracts with		
D. H. Andrews (Iron superstructure) . . .	49,896 05	
Wm. G. Barker (Kyanized plank)	1,052 35	
Boynton Bros. (Draw foundation and pier) . .	10,442 95	
(Fenders)	2,976 64	
Wm. M. Keyes & Co., (Wooden flooring)	8,852 14	
Manley Mfg. Co. (Iron railing)	3,191 37	
Alex. McInnis (Roadway sheathing)	1,025 00	
Shields & Carroll (Masonry piers) . . .	25,741 99	
Filling	38 10	
Fuel	12 88	
Amounts carried forward,	$104,557 63	$142,478 17

Amounts brought forward	$104,557 63	$142,478 17
Inspection of materials	100 00	
Labor	36 48	
Paving (experimental)	107 73	
Printing, postage and stationery	60 21	
Rent of land	210 00	
Salaries,—		
Leander Greely, Commissioner	1,124 99	
Wm. Jackson, Engineer,	999 96	
Assistant Engineers	5,268 09	
Walter H French, Secretary	213 33	
Warren F. Spaulding, Secretary	498 34	
Section fence	36 50	
Sundries	52 97	
Surveying lumber	17 58	
Teaming	15 89	
Telephone, rent and toll	60 00	
Traveling expenses of Engineers	84 34	
		$113,444 04
Balance unexpended		$29,034 13

BRIDGES, WEST BOSTON, CRAIGIE'S AND PRISON POINT.

CITY OF CAMBRIDGE (ONE HALF).

Appropriation	$11,000 00
Surplus receipts	25 45
	$11,025 45
Transferred to Cambridge Cemetery	2,000 00
	$9,025 45

RECEIVED.

For Rent, wharfage, etc.	$425 45	

EXPENDED.

For Cleaning bridge	147 30	
Count of travel	7 12	
Electric lighting	1,186 25	
Amounts carried forward,	$1,340 67	$9,025 45

Amounts brought forward,	$1,340 67	$9,025 45
For Fuel	221 35	
Hardware, tools and supplies	218 15	
Lumber	1,407 85	
Messenger fees, car fares, etc.	33 07	
Paving	63 93	
Printing, postage and stationery	36 12	
Repairs	1,196 08	
Salaries,—		
Wm. J. Marvin, Commissioner.	500 00	
Chas. S. Parsons, Clerk	150 00	
Engineers and Draw Tenders	2,105 00	
Sprinkling roadway	400 00	
Sundries	79 53	
Water	27 50	
		$7,779 25
Balance unexpended		$1,246 20

CAMBRIDGE CEMETERY.

Appropriation	$14,000 00
Surplus receipts	3,207 26
Transferred from Bridges (W. B., C., & P. P.)	2,000 00
	$19,207 26
Transfered to School Dept., Salaries	2,000 00
	$17,207 26

RECEIVED.

For Burial fees	$4,170 13	
Care of lots	4,019 74	
Foundations, brick graves, etc.	832 33	
Interest on Cemetery Fund	671 00	
Rent	365 96	
Sales of Apples	9 00	
Hay	55 00	
Lots and graves	7,027 35	
Wood	56 75	
Amounts carried forward,		$17,207 26

Amount brought forward		$17,207 26

EXPENDED.

For Bricks	$51 70	
Canvas covers	25 50	
Drain pipe	16 83	
Expressage	6 89	
Filling	540 53	
Fence	54 00	
Fuel	63 60	
Grave covers, etc. . . .	364 39	
Hardware, tools and supplies .	207 86	
Harness and repairs . . .	27 90	
Hay and grain	88 38	
Horseshoeing	37 94	
Labor, as per pay-rolls .	10,648 40	
Lumber, lime and cement . .	222 06	
Manure	207 45	
Marble tablets	150 00	
Plants and seeds . . .	168 98	
Printing, postage and stationery	311 74	
Repairs, carpenter work, etc. .	187 66	
Safe, and moving same . .	56 00	
Salaries,—		
Chas. S. Childs, Supt. .	1,299 96	
J. Watson Taylor, Book-keeper	913 50	
Walter W. Pike, Clerk of Com.	50 00	
Signs	44 50	
Stone	29 23	
Street sprinkling, . . .	58 00	
Sundries	83 77	
Telephone rent and tolls . .	52 90	
Wagon repairs	18 50	
		$15,988 17
Balance unexpended		$1,219 09

CAMBRIDGE CEMETERY.

(OLD BURIAL GROUND, WARD ONE).

Appropriation	$300 00

EXPENDED.

For Labor, as per pay-rolls	$300 00

CAMBRIDGE PUBLIC LIBRARY.

Appropriation	$9,500 00

RECEIVED.

For Catalogues and fines . .	$154 28	
Dog licenses for 1888 . .	3,779 36	
Old paper	3 20	
	$3,936 84	

EXPENDED.

For Advertising	$10 00	
Binding books . . .	827 72	
Books, periodicals, etc. . .	1,696 91	
Electric lights . . .	343 00	
Electric bells	12 90	
Expressage, car fares, and postage	29 01	
Fuel	315 50	
Furniture and furnishings . .	289 40	
Gas	313 13	
Gas fixtures and fittings . .	66 24	
Hardware, tools and supplies .	83 98	
Hose	18 75	
Ice	15 85	
Insurance	536 47	
Moving books	71 50	
Printing	201 72	
Amounts carried forward,	$4,832 08	$9,500 00

Amounts brought forward,	$4,832 08	$9,500 00
For Rent	765 00	
Repairs, carpenter work, etc. .	237 01	
Salaries,—		
A. L. Hayward, Librarian .	849 96	
Assistants	2,015 69	
John Little, Janitor . .	315 00	
Andrew J. Ayers, Janitor .	375 03	
Stationery supplies . . .	98 40	
Sundries	2 00	
		$9,490 17
Balance unexpended		$9 83

CITY BUILDINGS, CARE AND REPAIRS.

Appropriation	$12,000 00
Transferred from School Houses, care and repairs	1,000 00
	$13,000 00

RECEIVED.

For Rent:		
Armories (Com. of Mass.) .	$800 00	
District Court Room (County of Middlesex) . .	350 00	
Office and shop (Cambridge Water Works) . .	600 00	
Tenements (Firemen) .	191 69	
Halls (Sundry Persons) .	42 53	
Rebate on supplies . . .	8 62	
	$1,992 84	
Amount carried forward, ...		$13,000 00

Amount brought forward,		$13,000 00

EXPENDED.

For City Hall:			
Cleaning	541 00		
Clock and repairs	4 75		
Electric lights	210 00		
Fuel	369 78		
Furniture and furnishings	109 27		
Gas	390 21		
Gas fittings	7 30		
Hardware, tools and supplies	14 27		
Ice	103 23		
Repairs	197 63		
Salary, Charles A. Gay, Janitor	1,201 90		
Sundries	56 29		
		$3,205 63	
Ward One Building:			
For Clock and repairs	3 85		
Electric gas lights	8 00		
Fuel	925 58		
Furniture and furnishings	38 92		
Gas	605 55		
Iron track	64 46		
Lighting tower clock	180 00		
Paving driveway	8 00		
Repairs	806 87		
Salary, Charles Munroe, Janitor	1,251 43		
Sundries	31 07		
		$3,923 73	
Amounts carried forward		$7,129 36	$13,000 00

Amounts brought forward, .		$7,129 36	$13,000 00
Ward Three Building:			
For Care of fires . .	40 00		
Care of Wardroom .	50 00		
Gas . . .	9 74		
Gas fittings . .	4 71		
Repairs . . .	283 08		
Supplies . .	3 02		
		$390 55	
Ward Four Building:			
For Fuel . . .	937 58		
Furniture and furnishings . .	58 35		
Gas . . . ,	268 47		
Repairs . . .	426 74		
Salary, George D. Brown, Janitor .	1,201 90		
Supplies . .	30 34		
		$2,923 38	
Ward Five Building:			
For Care of Ward Room	50 00		
Gas . . .	4 96		
Gas fittings . .	4 95		
Mats . . .	4 40		
Repairs . . .	249 06		
Supplies . .	90		
		$314 27	
Engine House, No. 2: For Repairs . . .		78 10	
Engine House, No. 5: For Repairs . . .		35 01	
Hook and Ladder, No. 2: For Repairs . . .		45 08	
Amounts carried forward, .		$10,915 75	$13,000 00

Amounts brought forward .		$10,915 75	$13,000 00
Bath House:			
For Anchor . . .	14 40		
Mooring and moving	47 00		
Repairs . . .	265 16		
Salary of Superintendent, Frederick Clover . .	375 00		
Signs . . .	5 50		
Supplies . .	49 31		
		756 37	
Rifle Range:			
For Carpenter work .	368 82		
Electric bells .	35 00		
Grading . .	4 00		
Rent of land . .	60 00		
Sundries . .	12 65		
		480 47	
Incidentals:			
For Care of Supt. of Buildings horse and carriage .	387 51		
Carriage hire for Committee . .	41 00		
Refreshments for Committee . .	13 50		
		442 01	
			12,594 60
Balance unexpended .			$405 40

DISCOUNTS, TAXES.

Appropriation	$27,000 00
Transferred from Incidental Expenses	1,100 00
	$28,100 00
EXPENDED.	
For discount on taxes of 1889, paid on or before Oct. 10, 1889	28,081 09
Balance unexpended . . .	$18 91

ENGINEERING.

Appropriation		$9,000 00
Surplus receipts		91 00
		$9,091 00

RECEIVED.

For Making Plans and writing descriptions	$91 00	

EXPENDED.

For Atlas of Middlesex County	$15 00	
Binding Index and Plans	20 10	
Boundary Stone	4 00	
Carriage hire	23 50	
Drawing and Surveying Instruments and materials	236 03	
Inspection of bridges	5 00	
Labor	26 07	
Printing	14 75	
Salaries,—		
Wm. S. Barbour, City Engineer	1,000 00	
Lewis M. Hastings, City Engineer	2,000 00	
Sundry Assistants	5,243 20	
Sundries	4 00	
Supplies	59 83	
		8,651 48
Balance unexpended		$439 52

FIRE DEPARTMENT.

Appropriation	$55,000 00
Surplus receipts	221 69
Transferred from Incidental Expenses	337 88
Amount carried forward,	$55,559 57

	Amount brought forward, .		$55,559 57

RECEIVED.

For	Fuel	$42 78	
	Horse	140 00	
	Manure	75 00	
	Old materials . . .	163 91	
		$421 69	

EXPENDED.

For	Apparatus and repairs . .	$481 40	
	Bedding and furniture . .	80 54	
	Care of hydrants . . .	24 00	
	Brooms and brushes . .	34 40	
	Carpenter work . . .	19 10	
	Carriage hire for Committee .	11 00	
	Copper	55 78	
	Expressage	26 20	
	Fines, remitted . . .	108 00	
	Fire hats and badges . .	85 50	
	Fuel	1,544 94	
	Gas	948 76	
	Hardware and tools . .	137 46	
	Harnesses and repairs . .	203 53	
	Hay, grain and straw . .	2,487 93	
	Horses	1,640 00	
	Horse hire	203 00	
	Horseshoeing . . .	555 32	
	Hose and repairs . . .	514 55	
	Ice	52 90	
	Labor	25 00	
	Printing and stationery .	51 30	
	Private telephone circuit .	400 00	
	Refreshments . . .	10 00	
	Salaries,—		
	Thos. J. Casey, Chief Engineer	1,500 00	
	Amounts carried forward, .	$11,200 61	$55,559 57

Amounts brought forward, .	$11,200 61	$55,559 57
N. W. Bunker, Asst. Engineer	375 00	
N. W. Bunker, Clerk of Board	25 00	
Chas. W. Brackett, Asst. Engineer . . .	375 00	
Wm. B. Cade, Asst. Engineer	375 00	
Permanent Men, Engineers, Firemen and Drivers .	25,064 43	
Call Men	14,254 85	
Substitutes, vacations and sickness . . .	1,435 50	
Signal Boxes and repairs .	611 00	
Spelter	164 98	
Sponges	42 00	
Supplies for Chemical Engine	60 40	
Supplies for F. A. Telegraph	736 06	
Sundry supplies . . .	98 22	
Taking down and putting up bell	159 92	
Veterinary Surgeons and medicines . . : .	242 67	
Washing bedding . .	338 93	
		$55,559 57

HEALTH DEPARTMENT.

Appropriation		$3,500 00
EXPENDED.		
For Analysis of sewage . .	65 00	
Burying Animals . . .	57 00	
Car tickets	70 00	
Cow-pox points . . .	26 12	
Disinfectants . . .	22 18	
Jars	5 50	
Amounts carried forward, .	$245 80	$3,500 00

Amounts brought forward, .	$245 80	$3,500 00
Salaries,—		
Dr. A. F. Holt, Health Officer	875 00	
Dr. Edwin Farnham, Med. Inspector . . .	550 00	
Chas. S. Lincoln, Sanitary Inspector . . .	966 66	
John McDuffie, Clerk .	175 00	
Stationery, printing and postage	149 62	
Sundries	5 95	
Testing water . . .	5 00	
Traveling Expenses of Medical Inspector. . . .	16 64	
		$2,989 67
Balance unexpended . . .		$510 33

INCIDENTAL EXPENSES.

Appropriation			$45,000 00
Surplus receipts			592 99
			$45,592 99
Transferred to	Discounts, Taxes .	$1,100 00	
	Fire Department .	337 88	
	Police Department	400 68	
	Salaries . .	66 67	
	School-House land Ward 4 . .	6,000 00	
	State Aid . .	500 00	
	Shade Trees and Public Grounds	300 00	
	Street Department, Ex. of Washington Avenue .	1,670 00	
			10,375 23
			$35,217 76

Amount brought forward, .		$35,217 76

RECEIVED.

For Cap-stones and Iron railing .	40 00	
Counters and fixtures . .	25 00	
Fees from City officers:		
City Clerk	2,147 16	
City Weighers,		
Thomas Gurnham . .	84 12	
T. D. Sullivan . . .	101 13	
Collector of Taxes . .	1,260 48	
Sealer of Weights and Measures	413 09	
Licenses,		
Grease	42 00	
Liquor	40 00	
Milk and Butterine . .	108 00	
Peddlers	150 00	
Rebate	25 00	
Return Premium on Ins. Policy	17 00	
Sods	134 01	
Sundries	6 00	
	$4,592 99	

EXPENDED.

For Assessors Dept.,—			
Abstracting Deeds.	$314 66		
Banker and Tradesman . . .	5 00		
Directories . -	7 50		
Salaries,—			
C. H. Hunnewell, Asst. Assessor Ward 1 . .	208 00		
H. R. Harding, Asst. Assessor Ward 2 . .	284 00		
Am'ts carried forward.	$819 16		$35,217 76

Am'ts brought forward	$819 16		$35,217 76
For Salaries,—			
Geo. F. McKenzie, Asst. Assessor Ward 3 .	100 00		
John Lennon, Assistant Assessor Ward 4 .	292 00		
Thos. F. Cahir, Asst. Assessor Ward 5 . .	208 00		
Lizzie E. Estes, Per. Clerk .	600 00		
Ida G. Wellington, Per. Clerk	600 00		
Sundry Clerks .	828 00		
		$3,447 16	
For Auditor's Dept.,—			
Clerical Assistance	495 50		
Directories . .	7 50		
Hand Stamp . .	5 50		
		508 50	
For City Clerk's Dept.,—			
Census of Births .	256 50		
Clerical Assistance	446 20		
Copying Town and City Records from 1704 . . .	130 20		
Dillon's Mun Corp.	11 00		
Directories . .	7 50		
Folio . . .	3 00		
Lettering books .	8 61		
License badges .	87 00		
Newspapers . .	12 13		
Pasteboard boxes .	7 50		
Public Statutes .	4 25		
Am'ts carried forward .	$973 89	$3,955 66	$35,217 76

Am'ts brought forward .	$973 89	$3,955 66	$35,217 76
For City Clerk's Dept.,—			
Registered Letters .	1 32		
Returns of births and deaths . .	107 75		
Serving warrants, posting notices, etc. . . .	150 24		
Revision of City Ordinances, Judge Wm. H. Orcutt .	600 00		
Type-writing . .	52 65		
		1,885 85	
For City Council, —			
Carriage hire . .	162 00		
Page, Wm. Locklin	50 00		
Refreshments . .	123 50		
		335 50	
For City Messenger's Dept.,—			
Assistn't Messenger	260 83		
Directories . .	9 50		
Railroad Guide .	1 50		
		271 83	
For City Solicitor's Dept.,—			
Carriage hire .	8 00		
Court expenses .	179 95		
Examination of titles . . .	197 00		
Expert testimony .	25 00		
Type-writing copies	113 16		
		523 11	
For City Treasurer's Dept.,—			
Carriage hire .	326 50		
Clerical assistance .	4,438 10		
Commissions for collecting poll taxes	935 50		
Am'ts carried forward,	$5,700 10	$6,971 95	$35,217 76

Am'ts brought forward	$5,700 10	$6,971 95	$35,217 76
For City Treasurer's Dept.,—			
Counterfeit detect'r	3 00		
Directories . .	9 50		
Distributing tax notices . .	156 65		
Distributing water notices . .	82 63		
Engraving bonds .	290 00		
Hand stamps . .	11 00		
Premium on bonds .	186 20		
Recording deeds .	33 03		
Release of tax title	19 25		
Repairing burglar alarm . . .	7 00		
		6,498 36	
For Civil Service Dept.,—			
Advertising . .	18 75		
Boxes . . .	18 17		
Clerk, Chas. S. Lincoln . . .	150 01		
Sign . . .	4 00		
Stationery and printing . . .	71 03		
		261 96	
Clerk of Committees Dept.,—			
Clerical assistance .	926 00		
Directories . .	7 50		
Newspapers . .	2 50		
Rubber Stamp .	25		
		936 25	
Commissioners of Sinking Funds,—			
Clerk, John McDuffie . .	25 00		
Rent of Box (Safe Deposit and Trust Co.,) . . .	30 00		
		55 00	
Amounts carried forward . .		$14,723 52	$35,217 76

Amounts brought forward . .		$14,723 52	$35,217 76
Mayor's Dept.,—			
Directory . .	$2 50		
Letter File and Globe Indexes .	4 10		
		6 60	
Milk and Vinegar Inspector's Dept.,—			
Analysis, Apparatus and Chemicals .	22 05		
Salaries,—			
Charles S. Lincoln, deputy . .	66 67		
John F. Wheeler, deputy . .	133 37		
Samples . .	65 60		
		287 69	
Sealer of Weights and Measures Dept.,—			
Account Books .	18 15		
Carriage hire . .	101 00		
Hardware, Tools, etc	23 28		
Labor . . .	10 00		
Oak Case . .	65 00		
Printing . .	4 00		
Salary of Deputy C. D. Kinnear .	117 50		
Scales . . .	33 50		
Stamp Brands .	6 50		
		378 93	
Sundry Expenses,—			
Care and repair of City Scales . .	222 51		
Care of Clocks .	169 10		
Care and repair of Flags and Flag-staffs . . .	61 50		
Am'ts carried forward	$453 11	$15,396 74	$35,217 76

Am'ts brought forward	$453 11	$15,396 74	$35,217 76
Sundry Expenses,—			
Car Tickets for City Government and Departments .	600 00		
		1,053 11	
Damages awarded and Suits settled,—			
Allen & Endicott .	300 00		
Cambridge Casino .	700 00		
Docker & Holton .	88 00		
Ann Duffy . .	75 00		
James Lacy . .	50 00		
Mary E. Meacham .	125 00		
Catherine O'Connor	400 00		
Frances M. Odiorne	250 00		
Parry Bros., & Co.	319 46		
John T. Scully .	300 00		
Wm. Terrill . .	15 00		
		$2,622 46	
Executions of Court,—			
Mary Botelho .	100 25		
Peter Donahue et al	1,300 00		
Ellen T. Kelley .	959 15		
Chas. S. Lincoln, Exr.	118 25		
Julia A. Wheeler .	378 35		
		$2,856 00	
Decorations April 30, 1889 . .	10 00		
Dedication of new Public Library .	66 74		
Directory for Sup't of Buildings .	2 50		
Expressage . .	57 65		
Firing Salute, April 30, 1889 . .	150 00		
Am'ts carried forward	$286 89	$21,928 31	$35,217 76

Am'ts brought forward	$286 89	$21,928 31	$35,217 76
For Sundry Expenses,—			
Fountain Dippers .	2 73		
High School Exhibition . . .	50 00		
Laying Corner-stone of new City Hall,	326 60		
Liquor Licenses, ¼ to State . .	10 00		
Mass. Reports .	9 75		
Memorial Day, G. A. R . . .	1,000 00		
Mill Pond Filling .	93 00		
Reimbursement of John Wiley .	45 00		
Rent of P. O. Box .	4 00		
Ringing Bells on Holidays . .	108 00		
Running Ambulance,	99 50		
Shovelling Snow from City Property . . .	3 00		
Stretcher . .	4 00		
Tax on Almshouse Land in Somerville . . .	379 40		
Weighing Coal .	23 45		
		$2,445 32	
Election Expenses, —			
Advertising and Printing .	1,232 90		
Binding, and Mounting Voting Lists .	45 50		
Carriage Hire . .	80 50		
Clerical Work .	279 12		
Copies of Election Laws . . .	42 50		
Am'ts carried forward	$1,680 52	$24,373 63	$35,217 76

Am'ts brought forward		$24,373 63	$35,217 76
Election Expenses,—			
Extra Police Officers	55 00		
Hand Stamps	16 00		
Labor Preparing Voting rooms and Cleaning same	1,236 35		
Lamps	61 82		
Moving Furniture	22 00		
Pasteboard Boxes	15 40		
Posting voting lists, serving warrants and notices	113 21		
Precinct Maps	116 50		
Officers	2,444 50		
Seals	12 00		
Refreshments at Recounts	52 00		
Rent of Rooms for caucus and voting purposes	223 00		
Repairs of Ballot-Boxes	2 75		
Ringing Bells on Election days	31 00		
Sawdust	7 75		
Stationery supplies,	116 29		
Voting box	34 32		
Voting Compartments, shelves, and tables	605 00		
		6,845 41	
			31,219 04
Balance unexpended			$3,998 72

INTEREST.

Appropriation	$120,000 00
Surplus Receipts	1,477 05
	$121,477 05

RECEIVED.

For Accrued Interest on Bonds sold	$1,179 47	
Deposits in Bank	1,555 95	
Mortgage Notes	82 50	
Taxes	1,659 13	
	$4,477 05	

EXPENDED.

For Cemetery Fund	$671 00	
Daniel White Charity	300 00	
Dowse Institute Fund	600 00	
Funded Loan, coupons	85,590 00	
Funded Loan, registered	13,075 00	
Note to Trustees of Sinking Fund of Water Works	8,000 00	
Sanders Temperance Fund	600 00	
Temporary Loan	5,919 54	
		114,755 54
Balance unexpended		$6,721 51

LIGHTING STREETS.

Appropriation	$47,000 00
Surplus receipts	250 73
Amount carried forward	$47,250 73

Amount brought forward		$47,250 73

RECEIVED.

For Damage to Lamps . .	$46 88	
Lamps and setting . .	202 70	
Old Lanterns . . .	1 15	
	$250 73	

EXPENDED.

For Carriage hire for Committee .	$48 50	
Carriage hire for Supt. . .	144 00	
Cleaning Carpet . . .	2 32	
Electric Lighting . . .	20,942 07	
Gas Lighting . . .	13,697 85	
Hardware, tools, and repairs .	30 07	
Ladders and repairs . .	6 60	
Matches	16 34	
Oil	440 15	
Paint, Glass, Putty, etc. .	200 94	
Printing	18 95	
Repairs on Lamps . .	728 95	
Salaries, —		
B. Otis Danforth, Supt. .	941 66	
Sundry Lamplighters . .	7,786 13	
		$45,004 53
Balance unexpended		$2,246 20

PAUPER DEPARTMENT — ALMSHOUSE.

Appropriation	$26,000 00
Surplus receipts	2,147 25
	$28,147 25
Transferred to Pauper Department, Outside Aid,	1,586 15
Amount carried forward . . .	$26,561 10

Amount brought forward . . .		$26,561 10

RECEIVED.

For Barrels	$43 19	
Board of inmates . . .	274 84	
Farm produce . . .	3,684 59	
Grease and bones . . .	79 58	
Proceeds of chair shop . .	479 28	
Stone	5,564 18	
Sundries	10 74	
Weighing fees . . .	10 85	
	$10,147 25	

EXPENDED.

For Advertising	$13 26	
Boys' overwork . . .	13 00	
Burial expenses . . .	99 00	
Cash to inmates . . .	73 55	
Car fares	25 91	
Clothing, dry goods, and bedding	2,166 38	
Cows	127 00	
Disinfectant . . .	16 00	
Drugs, medicines, and surgical instruments . .	221 82	
Expressage and freight .	34 51	
Fish	573 34	
Flower-pots	10 34	
Fuel	2,282 28	
Furniture and furnishings .	486 03	
Gas	287 94	
Groceries and provisions .	6,715 14	
Hardware, tools, and repairs .	325 01	
Harness repairs . : .	6 50	
Hay and grain . . .	423 61	
Horse	150 00	
Hose and rubber goods . .	39 18	
Amounts carried forward .	$14,089 80	$26,561 10

	Amounts brought forward .	$14,089 80	$26,561 10
For	Hot-bed sashes . . .	142 50	
	Ice	157 85	
	Lumber, lime, and cement .	211 57	
	Manure	412 87	
	Medical attendance . .	10 00	
	Milk	75 35	
	Musicians	7 00	
	Newspapers, periodicals, etc.,	25 25	
	Oils, paints, glass, etc. . .	165 98	
	Pigs	60 50	
	Plants and seeds . . .	144 10	
	Powder	213 02	
	Rattan and cane . . .	234 83	
	Rent of market stand . .	40 00	
	Repairs of house . . .	486 07	
	Salaries, —		
	M. L. Eldridge, Supt. .	1,486 58	
	F. W. Holland, Chaplain .	100 00	
	Alice H. Fawcett, School teacher	451 35	
	Minnie G. Hillman, Organist and Music teacher .	150 00	
	Sundry House officials .	3,796 11	
	Sundry Farm employés .	1,108 25	
	Sundry Ledge employés .	2,212 90	
	School supplies . . .	11 35	
	Sewing machine . . .	40 00	
	Shoe findings and leather .	61 36	
	Soap	114 34	
	Spectacles, clocks, and repairs,	10 22	
	Stabling horse . . .	8 50	
	Stationery and printing .	61 16	
	Stone	136 70	
	Sundries	21 17	
	Teaming	48 12	
	Telephone rent and tolls .	52 85	
	Toys, fireworks, etc. . .	35 04	
	Amounts carried forward .	$26,382 69	$26,561 10

Amounts brought forward .	$26,382 69	$26,561 10
For Use of barge on July 4 .	7 00	
Wagon repairs . . .	100 64	
		$26,490 33
Balance unexpended .		$70 77

PAUPER DEPARTMENT—HOUSE OFFAL.

Appropriation	$18,500 00
Surplus receipts	824 61
	$19,324 61
Transferred to Pauper Department, Outside Aid,	800 00
	$18,524 61

RECEIVED.

For House Offal	$7,324 61

EXPENDED.

For Harness and repairs . .	$190 19	
Hay, grain, and straw . .	2,049 03	
Horses	260 00	
Horse shoeing	297 33	
Lumber	226 70	
Salaries of employés . .	14,332 00	
Shingling stable . . .	88 00	
Supplies, sundry . . .	70 51	
Veterinary surgeon and medicine	35 00	
Wagons and repairs . .	596 44	
		$18,145 20
Balance unexpended .		$379 41

PAUPER DEPARTMENT — OUTSIDE AID.

Appropriation		$30,000 00
Transferred from Pauper Department, Almshouse . . .	$1,586 15	
Transferred from Pauper Department, house offal . . .	800 00	
		2,386 15
		$32,386 15

RECEIVED.

For Aid to, board and burial of paupers, by cities, towns, and individuals . . .	$2,718 23	
Commonwealth of Mass. .	1,118 89	
Rebate on bill . . .	2 00	
	$3,839 12	

EXPENDED.

For Aid to, board and care of paupers, by cities, towns, and individuals . . .	$3,037 16	
Board of children . .	1,388 33	
Boots and shoes . . .	113 80	
Burial of paupers . . .	255 00	
Care of feeble-minded at Mass. School for Feeble-Minded .	517 14	
Care of insane at Danvers Lunatic Hospital . .	2,805 61	
Care of insane at Northampton Lunatic Hospital .	169 46	
Care of insane at Taunton Lunatic Hospital . .	338 92	
Care of insane at Westborough Insane Hospital . .	2,359 50	
Amounts carried forward .	$10,984 92	$32,386 15

Amounts brought forward, .	$10,984 92	$32,386 15
For Care of insane at Worcester Insane Asylum . .	2,598 14	
Care of insane at Worcester Lunatic Asylum . .	5,668 88	
Care of Insane by Commonwealth of Massachusetts at Danvers Lunatic Hospital,	293 43	
Worcester Lunatic Asylum,	148 53	
Westborough Insane Hospital	173 63	
Care of Paupers at House of Correction . . .	106 29	
Care of Paupers at State Almshouse . . .	381 20	
Care of Paupers at State Farm	110 00	
Care of Sick at Boston City Hospital	4 00	
Care of Sick at Carney Hospital	627 42	
Care of Sick at Cambridge Hospital	395 52	
Care of Sick at Children's Hospital	199 77	
Carriage hire and ambulance fees	114 00	
Car tickets	170 60	
Coal shed	315 28	
Directories	17 65	
Drugs, medicines and surgical instruments . . .	251 58	
Dry goods, clothing, etc. .	141 07	
Fuel	3,546 94	
Gas	87 83	
Groceries and provisions .	2,256 26	
Ice	13 75	
Medical attendance . .	77 50	
Nurse hire	32 00	
Amounts carried forward .	$28,716 19	$32,386 15

Amounts brought forward .	$28,716 19	$32,386 15
Printing, postage and stationery	277 90	
Salaries, —		
D. P. Muzzey, Secretary .	1,400 04	
V. Danforth, Visitor .	1,499 10	
Addie M. Benson, Clerk .	182 25	
Shoe racks	21 05	
Sundries	33 08	
Telephone, rent, and tolls .	106 90	
Travelling expenses of Visitor,	101 14	
Wagon repairs . . .	48 50	
		$32,386 15

POLICE DEPARTMENT.

Appropriation	$87,000 00
Transferred from Incidental Expenses . .	400 68
	$87,400 68

RECEIVED.

For Cloth for uniforms . .	$324 96	
Court fees and fines . .	4,530 77	
Transportation of prisoners .	12 50	
Witness fees . . .	5 00	
		4,873 23

EXPENDED.

For badges, buttons, etc. . .	$72 50	
Belts	122 00	
Billies and clubs . . .	100 60	
Care of horses . . .	605 00	
Carriage hire . . .	31 00	
Carriage repairs . . .	70 50	
Carriage robe . . .	5 91	
Cleaning stations . . .	153 76	
Cloth for uniforms . .	685 09	
Directories	26 00	
Expressage	5 25	
Food for prisoners . .	87 17	
Amounts carried forward .	$1,964 78	$87,400 68

Amounts brought forward .	$1,964 78	$87,400 68
For Gas	483 01	
Harness and repairs . .	27 00	
Ice	37 87	
Lanterns	18 00	
Medical expenses . . .	9 30	
Office furniture and bedding,	54 27	
Photographs . . .	36 00	
Printing, postage and stationery	198 37	
Prison van	400 00	
Salaries,—		
L. J. Cloyes, Chief . .	1,700 00	
Thos. J. Lucy, Captain .	1,248 00	
M. J. Folsom, Captain .	1,248 00	
J. F. Murray, Captain .	1,248 00	
Wm. F. Batchelder, Court Officer	1,179 00	
L. J. Ducey, Inspector .	1,186 25	
A. S. Harriman, Inspector,	1,158 00	
Sundry Sergeants . .	7,467 00	
Sundry Patrolmen . .	66,627 76	
Sundry Matrons . .	624 00	
Sundry Supplies . . .	63 80	
Telephone, rent and tolls .	109 65	
Travelling and court expenses of Chief and Inspectors .	292 62	
Washing, bedding, etc . .	20 00	
		$87,400 68

SALARIES.

Appropriation	$27,850 00
Transferred from incidental expenses . .	66 67
	$27,916 67

RECEIVED.

From Cambridge Water Works for services of City Solicitor .	$1,500 00	
Amount carried forward .		$27,916 67

Amount brought forward . . .		$27,916 67

EXPENDED.

For Salaries of		
Mayor, Wm. E. Russell .	$208 33	
Henry H. Gilmore . .	2,291 67	
City Treasurer and Treasurer of Sinking Funds, Wm. W. Dallinger . .	3,300 00	
City Clerk, Walter W. Pike	2,800 00	
Assistant City Clerk, Edward J. Brandon . . .	1,000 00	
Clerk of the Common Council, Edward N. Manning .	300 00	
Auditor, Harry T. Upham .	1,800 00	
Assessors, Joshua G. Gooch,	1,500 00	
Joseph Whittemore . .	1,500 00	
Andrew J. Green . .	1,500 00	
City Solicitor, Charles J. McIntire	2,500 00	
Clerk of Committees, John McDuffie	2,366 67	
City Messenger, Francis L. Pratt	1,800 00	
Supt. of Public Buildings, Benj. H. Steele . .	1,750 00	
Sealer of Weights and Measures, B. Otis Danforth .	350 00	
Inspector of Milk and Vinegar, Dr. F. A. Dunbar .	600 00	
Assistant City Physician, Dr. L. L. Bryant . . .	1,250 00	
Probation Officer, Fred. W. Hagar	1,000 00	
Harbor Master, Wm. J. Marvin	100 00	
		$27,916 67

SCHOOL DEPARTMENT.

(INCIDENTAL EXPENSES.)

Appropriation		$700 00
EXPENDED.		
For Advertising and printing .	$167 73	
Car tickets	95 00	
Collecting statistics . .	6 00	
Expenses of High School exhibition	11 33	
Salaries,—		
W. W. Wellington, Secretary	180 00	
S. B. Hubbard, Secretary .	120 00	
Arthur Chamberlain, Page	25 00	
Services of Francis Cogswell in connection with examinations	10 00	
Telegrams	1 49	
Travelling expenses of Francis Cogswell and others .	48 79	
		$665 34
Balance unexpended .		$34 66

SCHOOL DEPARTMENT — SALARIES.

Appropriation	$183,000 00
Surplus receipts	15 48
Transferred from Cambridge Cemetery . .	2,000 00
	$185,015 48
RECEIVED.	
For Hopkins Fund Income .	$761 48
Tuition of non-resident pupils	254 00
Amounts carried forward, .	$1,015 48 $185,015 48

Amount brought forward . . .		$185,015 48

EXPENDED.

For Salaries,—		
Francis Cogswell, Supt. .	$3,000 00	
Nathan Lincoln, music teacher	1,700 00	
Walter F. Brackett, drawing teacher	340 00	
Sanford B. Hubbard, purchasing agent . . .	1,500 00	
Truant officers . . .	2,700 00	
Sundry teachers . . .	175,536 26	
		$184,776 26
Balance unexpended .		$239 22

SCHOOL DEPARTMENT—TEXT-BOOKS AND SUPPLIES.

Appropriation		$13,000 00

RECEIVED.

For damage to and sale of books .	$243 35	
School supplies . . .	11 35	
	$254 70	

EXPENDED.

For Apparatus and Supplies . .	$3,135 92	
Binding Books	61 93	
Book covers . . .	495 50	
Car tickets	10 00	
Diplomas	113 23	
Directories	10 00	
Expressage and freight . .	234 71	
Piano covers	4 50	
Postage	58 60	
Printing	267 50	
Text-books . . .	8,538 46	
Tuning pianos	10 50	
		$12,940 85
Balance unexpended		$59 15

SCHOOL-HOUSES — (CARE AND REPAIRS.)

Appropriation		$37,000 00
Surplus receipts		141 79
		$37,141 79
Transferred to City Buildings, Care and Repairs		1,000 00
		$36, 141 79

RECEIVED.

For Damage by boys	$3 50	
Weighing and putting in Coal	138 29	
	$141 79	

EXPENDED.

For Bells and repairs	$18 90	
Black-boards	241 90	
Brushes, dusters, etc.	335 14	
Clocks and repairs	70 75	
Disinfectants	58 25	
Electric lighting	443 00	
Expenses of Committee		
to Fall River	15 00	
to Worcester	43 00	
for Carriage hire	5 00	
for Refreshments	15 00	
Fuel	11,035 02	
Furniture and furnishings	1,018 35	
Gas lighting	468 50	
Gas fittings and connections	106 92	
Hardware, tools and supplies	187 14	
Lumber	40 29	
Moving furniture, and expressage	75 50	
Removing night soil	252 00	
Rent of Institute Hall	500 00	
Repairs of school-houses	7,263 71	
Salaries of janitors	13,816 05	
Water supply	79 90	
		$36,089 32
Balance unexpended		$52 47

SCHOOL-HOUSES, NEW AND FURNITURE — NEW HIGH SCHOOL.

Appropriation		$200,000 00
EXPENDED.		
For architects,—		
Chamberlin & Whidden	$1,500 00	
Contract for building,		
J. E. Giddings & Son	3,150 00	
Expenses of committee	4 35	
		$4,654 35
Balance unexpended		$195,345 65

SCHOOL-HOUSES, NEW AND FURNITURE — PEABODY.

Appropriation		$21,716 26
EXPENDED.		
For Bell hanging	$24 95	
Carpenter work	104 36	
Clocks	31 50	
Connecting meter, etc.	11 20	
Contracts for —		
Building, Lord Bros.	17,530 50	
Heating and Ventilation, Smead & Northcott	2,150 00	
Plans and Specifications, James Fogerty	354 00	
Excavating and re-filling	44 00	
Fence	118 19	
Furniture and furnishings	1,203 37	
Grading	95 00	
Hardware and supplies	23 80	
Painting and glazing	25 13	
		21,716 00
Balance unexpended		26

SCHOOL-HOUSES, NEW AND FURNITURE. (PUTNAM COMPLETION.)

Appropriation		$45,000 00
EXPENDED.		
For Contract for building, D. Sullivan & Son . . .	$14,000 00	
Plans and specifications, James Fogerty . . .	400 00	
		14,400 00
Balance unexpended		$30,600 00

SCHOOL-HOUSES. (LAND FOR SCHOOL-HOUSE IN WARD FOUR.)

Appropriation		$6,000 00
EXPENDED.		
For a lot of land, containing about 25,650 square feet, and situated at the corner of Brookline and Allston Streets, in Ward Four . .		$6,000 00

SEWERS, CONSTRUCTION.

(Bath Street System — Continuation.)

Appropriation		$15,106 35
Surplus receipts		54 23
		$15,160 58
Transferred to Sewers, Construction,	$4,143 50	
Transferred to Sewers, Construction, (Belmont System) . . .	1,148 13	
		5,291 63
Amount carried forward .		$9,868 95

Amount brought forward		$9,868 95
RECEIVED.		
For Bricks and Filling . .	$54 23	
EXPENDED.		
For Bricks	2,503 70	
Carpenter work	52 49	
Castings	127 50	
Hardware, tools, etc. . .	33 34	
Labor, as per pay-rolls . .	4,976 39	
Lumber	19 31	
Paving	28 60	
Pipe and cement . . .	1,781 18	
Salaries—		
Supt. of Sewers, T. L. Pike,	103 00	
Inspector, Geo. P. Greenlaw,	20 00	
Teaming and rolling . .	207 37	
Water supply . . .	16 07	
		9,868 95

SEWERS, CONSTRUCTION.

(Belmont System.)

Appropriation		$2,000 00
Surplus receipts		5 25
Transferred from Sewers, Const., Bath St.	$1,148 13	
Transferred from Sewers, Const., Front St..	885 10	
		2,033 23
		$4,038 48
RECEIVED.		
For Barrels and cement . .	$5 25	
EXPENDED.		
For Bricks	$1,167 62	
Carpenter work	64 97	
Amounts carried forward .	$1,232 59	$4,038 48

Amounts brought forward, .	$1,232 59	$4,038 48
For Castings	42 50	
Fuel	9 00	
Labor, as per pay-rolls . .	2,050 65	
Fitchburg Railroad Co. .	27 50	
Lumber and lime . . .	136 35	
Pipe and cement . . .	393 29	
Sand	72 60	
Teaming and rolling . .	74 00	
		$4,038 48

SEWERS, CONSTRUCTION.—(FRONT AND ALBANY STS.)

Appropriation	$5,000 00
Transferred to Sewers, Construction, Belmont system	885 10
	$4,114 90

EXPENDED.

For Bricks	$436 45	
Carpenter work . . .	14 01	
Castings	63 75	
Fuel	40 15	
Hardware, Tools, etc. . .	17 25	
Labor, as per pay-rolls . .	1,712 03	
Lumber	329 07	
Piles	337 07	
Pipe and Cement . . .	914 20	
Salary of Sup't. T. L. Pike .	81 30	
Sundries	8 24	
Teaming and rolling . .	92 38	
Use of Pump . . .	69 00	
		$4,114 90

SEWERS, CONSTRUCTION. — (SUNDRY SEWERS.)

Appropriation		$25,000 00
Transferred from Sewers, Construction, Bath Street		4,143 50
		$29,143 50

RECEIVED.

For Assessments	$11,574 51	
Grading grounds at rifle range	4 00	
Gravel and barrels	24 60	
Middlesex County, sewer in Second Street	55 75	
Premium on bonds issued	1,862 00	
Right of West End Railway to drain into Auburn Place sewer	752 31	
	$14,273 17	

EXPENDED.

For Bricks	$2,300 09	
Carpenter work	130 29	
Carriage and horse hire	19 00	
Castings	884 01	
Fuel	14 45	
Gravel and sand	127 25	
Hardware, tools	119 29	
Labor, as per pay-rolls	14,456 86	
Lumber	583 99	
Piles	115 38	
Pipe and cement	8,159 75	
Stone	552 75	
Salary of Superintendent, T. L. Pike.	251 46	
Supplies and repairs	35 61	
Teaming and rolling	1,354 86	
Water supply	33 66	
		$29,138 70
Balance unexpended		$4 80

SEWERS, MAINTENANCE.

Appropriation	$20,000 00
Surplus receipts	101 85
	$20,101 85

RECEIVED.

For	Dredging Bridge Street sewer outlet (from the City of Somerville)	$1,455 86
	Labor and materials	545 99
		$2,001 85

EXPENDED.

For	Bricks	$224 90	
	Carpenter work	51 34	
	Carriage	100 00	
	Castings	235 06	
	Cleaning catch-basins, John Horrigan	1,932 00	
	Damage to Cambridge Tobogган Club	31 11	
	Derrick	89 50	
	Dredging Bridge Street sewer outlet, Boynton Bros.	2,259 40	
	Fuel	25 40	
	Gas	11 42	
	Gravel	39 80	
	Hardware, tools	492 18	
	Harness and wagon repairs	101 00	
	Hay and grain	264 10	
	Horseshoeing and clipping	71 75	
	Labor, as per pay-rolls	6,583 85	
	Lumber	68 47	
	Oatmeal	12 50	
	Oil	17 22	
	Paving	58 44	
	Pipe and cement	1,509 11	
	Amounts carried forward	$14,178 55	$20,101 85

Amounts brought forward,	$14,178 55	$20,101 85
For Printing	27 25	
Repairs on Binney Street sewer, John T. Scully	2,815 00	
Repairs of street roller	51 87	
Rubber hose	247 19	
Rubber goods and oil clothing	68 92	
Salary of Superintendent, T. L. Pike	1,188 23	
Sundry repairs and supplies,	37 85	
Teaming and rolling	886 60	
Veterinary surgeon and medicines	32 50	
		19,533 96
Balance unexpended		$567 89

SINKING FUNDS.

Appropriation	$65,435 00

EXPENDED.

Amount paid to Commissioners of Sinking Funds for 1889	$65,435 00

STATE AID.

Appropriation	$13,500 00
Transferred from Incidental Expenses	500 00
	$14,000 00

RECEIVED.

From Commonwealth of Massachusetts (reimbursement)	$9,993 50	
Town of Medfield (reimbursement	72 00	
	$10,065 50	

EXPENDED.

For Military Aid, as per pay rolls,	$9,092 25	
Indigent Aid, as per pay rolls,	2,919 00	
Amounts carried forward,	$12,011 25	$14,000 00

Amounts brought forward .	$12,011 25	$14,000 00
For Soldiers' Aid, board and burials	1,034 43	
Salary of clerk, Chas. L. Russell	540 00	
		$13,585 68
Balance unexpended		$414 32

STATIONERY AND PRINTING.

Appropriation	$5,000 00
Surplus receipts	30 10
	$5,030 10

RECEIVED.

For extra copies of reports . .	$30 10

EXPENDED.

For Account books . . .	$342 32	
Advertising . . .	368 10	
Binding reports . . .	14 25	
City documents . . .	1,110 80	
Postage	919 70	
Printing	1,178 91	
Stationery supplies . .	501 77	
		$4,435 85
Balance unexpended		$594 25

STREET DEPARTMENT. — (BRIDGES.)

Appropriation	$8,000 00

EXPENDED.

For Advertising	$1 75	
Bridge weights . . .	31 60	
Amounts carried forward,	$33 35	$8,000 00

Amounts brought forward, . .	$33 35	$8,000 00
For Fuel	12 70	
Hardware and supplies .	23 82	
Iron plates	33 76	
Labor, as per pay-rolls .	2,527 13	
Lumber	901 13	
		3,531 89
Balance unexpended		$4,468 11

STREET DEPARTMENT. — (BUILDING SEA WALL ON CHARLES RIVER, NEAR MILL POND.)

Appropriation	$1,850 35
Transferred from Street Department Repairs .	150 67
	$2,001 02

EXPENDED.

For Contract with Charles Linehan, for building wall .	$1,288 27	
Displacement of tide water, assessed by Commonwealth of Massachusetts. . .	712 75	
		$2,001 02

STREET DEPARTMENT. — (EXTENSION OF DE WOLFE STREET.)

Appropriation	$1,600 00

EXPENDED.

For Land and damage, —	
Rev. John J. Williams	1,583 00
Balance unexpended	$17 00

STREET DEPARTMENT. — (EXTENSION OF WASHINGTON AVENUE.)

Appropriation	$1,670 00

EXPENDED.

For Land and damage, —		
Reuben Arey, Chas. G. Green, and Solomon Niles		1,670 00

STREET DEPARTMENT. — (EXTENSION AND WIDENING OF FRONT STREET.)

Appropriation		$19,011 55

EXPENDED.

For Land and damage, —		
Mary E. Barrett	$5 00	
Ann B. Hall	2,500 00	
Thomas D. Mason	4,590 00	
John H. McCafferty	2,350 00	
Wm. McElroy	1,450 00	
Daniel K. Morrill	1,500 00	
James Otis, Devisees and Heirs of	1,700 00	
Wm. H. Wood	140 00	
		$14,235 00
Balance unexpended		$4,776 55

STREET DEPARTMENT. — (FILLING AND GRADING FRONT STREET.)

Appropriation	$25,000 00
Surplus receipts	2,699 75
Amount carried forward,	$27,699 75

Amount brought forward . . .		$27,699 75

RECEIVED.

For Premium on Bonds sold . .	$2,699 75	

EXPENDED.

For Gravel filling, Boston & Albany R. R. Co. .		$21,177 78
Balance unexpended		$6,521 97

STREET DEPARTMENT. — (NORTH RIVER FLAGGING STONE.)

Appropriation		$1,500 00

EXPENDED.

For North River Flagging Stone,		
Austin Ford . . .	$1,455 40	
Teaming, Austin Ford . .	44 60	
		$1,500 00

STREET DEPARTMENT. — (PAVING BROADWAY, MAIN STREET TO BREWERY STREET.)

Appropriation		$21,000 00
Transferred from Street Department, Widening Inman Street		350 00
		$21,350 00

EXPENDED.

For Chip stone, sundry persons .	$1,184 75	
Edge-stone, John P. Downey,	489 90	
Gravel, Jos. F. White . .	1,852 27	
Labor, as per pay-rolls . .	5,609 97	
Paving Blocks, S. & R. J. Lombard	11,408 50	
Paving Blocks, Samuel J. Sewall	785 90	
		21,331 29
Balance unexpended		$18 71

STREET DEPARTMENT. — (PAVING, EDGE STONES, AND SIDEWALKS.)

Appropriation		$15,000 00
RECEIVED.		
For Labor and paving materials .	$1,132 81	
Sidewalk assessments . .	1,646 25	
Sale of estates for non-payment of sidewalk assessments	148 97	
	$2,928 03	
EXPENDED.		
For Advertising	$39 90	
Bricks	3,259 79	
Edge stones	2,626 16	
Gravel	1,014 19	
Hardware, tools . . .	28 51	
Labor, as per pay-rolls . .	7,727 49	
Lumber and cement . .	19 67	
Oil	33 83	
Sundries	3 43	
Wharfage	25 00	
		14,777 97
Balance unexpended		$222 03

STREET DEPARTMENT — (REPAIRS AND COLLECTING ASHES.)

Appropriation	$112,000 00
Surplus receipts	6,380 25
Transferred from Street Department, Widening Inman Street	800 00
	$119,180 25
Transferred to Street Dept., Building Sea-wall .	150 67
Amount carried forward, ...	$119,029 58

	Amount brought forward		$119,029 58
	RECEIVED.		
For	Ashes, scrapings and filling .	$656 90	
	Bricks and stone . . .	27 00	
	Care of horse in pound . .	10 00	
	Chopping blocks . . .	30 50	
	Horses	280 00	
	Labor and materials, West End Railway Co. . .	5,359 10	
	Labor and materials, widening Brattle Street . .	1,660 00	
	Lumber	31 00	
	Manure	136 00	
	Old wagons and harness .	43 00	
	Second-hand doors, windows, etc.	23 75	
	Teaming	93 00	
	Use of Steam Roller . .	30 00	
		$8,380 25	
	EXPENDED.		
For	Advertising	$8 20	
	Bagging	38 15	
	Bricks	74 10	
	Brooms and brushes . .	68 55	
	Care of injured man at Cambridge Hospital . .	62 00	
	Carpenter work . . .	50 73	
	Carriage hire for Committee .	92 00	
	Carriage robe	12 00	
	Catch basins, etc. . . .	104 30	
	Damage by city team . .	5 95	
	Drugs, paint, etc. . . .	53 00	
	Engine supplies . . .	130 53	
	Expressage and freight . .	7 24	
	Fuel	937 49	
	Gas lighting . . .	225 24	
	Amounts carried forward .	$1,869 48	$119,029 58

Amounts brought forward .	$1,869 48	$119,029 58
For Gravel	1,770 37	
Hardware, tools, and repairs .	877 82	
Harness and repairs . .	465 98	
Hay and grain . . .	5,850 38	
Horses	2,225 00	
Horse-hire	104 00	
Hose couplings, etc. . .	35 67	
Labor, as per pay-rolls, —		
Regular men . . .	40,495 20	
Transient men . . .	23,270 01	
Land and damage,—		
Cyrus Fellows . . .	70 00	
Lumber, lime, and cement .	1,078 24	
Machinery and repairs . .	718 94	
Mason work	200 11	
Moving tablet on Inman Street	20 00	
Oatmeal	25 00	
Plumbing	135 90	
Printing and postage . .	36 00	
Refreshments for Committee,	5 00	
Rent of wharf . . .	50 00	
Salary of Supt., John McSorley	1,700 00	
Screenings	376 50	
Stone, cracked, F. W. Mead .	7,292 71	
Stone, field, sundry persons .	9,213 13	
Stone, ledge, sundry persons,	249 20	
Stone, gutter and cesspool, sundry persons . . .	317 75	
Stove	13 00	
Street signs	91 65	
Sweeper	315 00	
Sundries	24 14	
Tar, pitch, oakum, etc. . .	57 65	
Teaming, sundry persons .	19,220 85	
Telephone, rent and tolls .	34 50	
Amounts carried forward .	$118,209 18	$119,029 58

Amounts brought forward,	$118,209 18	$119,029 58
For Veterinary surgeon and medicine	184 30	
Wagon repairs	178 09	
Water supply, post hydrant, etc.	146 62	
		$118,718 19
Balance unexpended		$311 39

STREET DEPARTMENT. — (SHADE TREES AND PUBLIC GROUNDS.)

Appropriation	$4,500 00
Transferred from Incidental Expenses	300 00
	$4,800 00

EXPENDED.

For Cordage	$4 86	
Hardware, tools and repairs	72 45	
Labor, as per pay-rolls	4,177 97	
Lumber	132 39	
Paints, oils, etc.	24 51	
Plants, trees, and seeds	102 50	
		4,514 68
Balance unexpended		$285 32

STREET DEPARTMENT. — (WATERING.)

Appropriation	$18,000 00
Surplus receipts	337 64
	$18,337 64

RECEIVED.

For Sprinkling Streets, from sundry persons	$11,337 64	
West End Railway Co.	1,000 00	
Amount carried forward	$12,337 64	$18,337 64

Amount brought forward . . .		$18,337 64

EXPENDED.

For Account books . . .	$13 50	
Exchange of horses . .	275 00	
Horseshoeing . . .	8 25	
Labor, cleaning and repairing watering carts . . .	202 64	
Paints, oil, etc. . . .	127 20	
Printing	7 00	
Repairs of watering carts .	57 36	
Sprinkling, by contract with sundry persons . .	13,452 70	
Salary of Superintendent, Chas. A. Brown . .	698 35	
Stand pipes, valves, hose, etc.	183 02	
Sundries	24 39	
Use of horse . . .	18 00	
		15,067 41
Balance unexpended		$3,270 23

STREET DEPARTMENT. — (WIDENING BRATTLE STREET.)

Appropriation	$8,000 00
Surplus receipts	412 00
	$8,412 00

RECEIVED.

For Premium on bonds sold .	$412 00	

EXPENDED.

For Labor and material . .	$1,660 00	
Land and damage, —		
Heirs of Charles Lowell .	2,440 00	
Mount Auburn Corporation	1,800 00	
Moving drinking fountain .	12 64	
		5,912 64
Balance unexpended		$2,499 36

STREET DEPARTMENT. — (WIDENING INMAN STREET.)

Appropriation		$1,450 00
Transferred to Street Department, Paving Broadway	$350 00	
Transferred to Street Department, Repairs	800 00	
		1,150 00
		$300 00

EXPENDED.

For Land and damage, —		
James H. Bennett	$250 00	
Balance unexpended		$50 00

STREET DEPARTMENT. — (WIDENING MAIN STREET.)

Appropriation		$4,402 75

EXPENDED.

For Land and damage, —		
Benj. P. Clark	$1,300 00	
Catherine E. Watson	1,443 75	
		2,743 75
Balance unexpended		$1,659 00

WATER WORKS. — (CONSTRUCTION.)

Appropriation		$42,000 00
Surplus receipts		599 41
		$42,599 41

RECEIVED.

For Labor and materials	$499 41	
Sale of old pump	100 00	
Amount carried forward	$599 41	$42,599 41

Amount brought forward		$42,599 41

EXPENDED.

For Carpenter work . . .	$289 17	
Cart, harness, etc. . .	100 00	
Drinking fountain . .	155 00	
Fuel	9 75	
Hardware, tools, etc. . .	22 46	
Horse and carriage hire .	23 00	
Labor, as per pay-rolls . .	11,539 88	
Lead	741 15	
Lumber, lime and cement .	690 03	
Mason work . . .	64 75	
Meters	530 50	
Moving stable . . .	75 00	
Packing	65 86	
Painting	98 76	
Paving	99 29	
Pipe and fittings . .	9,068 66	
Printing	6 25	
Pumps and repairs . .	12,959 24	
Stable fittings . . .	21 36	
Stone and bricks . . .	26 75	
Teaming	5,228 90	
Wharfage	20 88	
		$41,836 64
Balance unexpended		$762 77

WATER WORKS, CONSTRUCTION. — (FRESH POND LAND ACCOUNT.)

Appropriation	$1,268 78
Surplus receipts	645 00
Transferred from Maintenance account . .	1,500 25
Amount carried forward	$3,414 03

Amount brought forward		$3,414 03
RECEIVED.		
For One-half expense of building fence	$85 00	
Pasturage	46 00	
Sale of house . . .	460 00	
Sundry receipts . . .	54 00	
	$645 00	
EXPENDED.		
For Carriage hire . . .	$4 00	
Examination of conveyances and records . . .	45 00	
Execution of Superior Court, suit of Samuel M. Cofran .	1,500 25	
Expense of entertaining City Council	146 00	
Expert testimony . . .	20 50	
Recording deeds . . .	11 00	
Reporting testimony, Walter Rogers & Co. . . .	185 70	
Services of City Solicitor .	750 00	
Serving notices and commission on sales . . .	20 54	
Sundries	3 07	
		2,686 06
Balance unexpended		$727 97

WATER WORKS, CONSTRUCTION. — (STONY BROOK ADDITIONAL WATER SUPPLY.)

Appropriation		$35,403 23
Surplus receipts		1,973 66
		$37,376 89
RECEIVED.		
For Costs in suits . . .	$111 66	
Premium on bonds sold .	1,862 00	
Amount carried forward . .	$1,973 66	$37,376 89

Amount brought forward		$37,376 89

EXPENDED.

For balance due for services of resident engineer, George Davis	$540 00	
Court expenses, witness fees, etc.	103 83	
Engraving bonds . . .	30 00	
Execution of Court in suit of Joseph Peterson . .	123 00	
Execution of Court in suit of Wm. Roberts . .	24,281 26	
Gate-house, Carpenter work,	52 50	
Gate-house, Iron work . .	22 40	
Gate-house, Stone work .	50 80	
Lumber	69 72	
Services of City Solicitor .	750 00	
Sundries	6 88	
		26,030 39
Balance unexpended		$11,346 50

WATER WORKS. — INTEREST.

Appropriation	$86,855 00
Surplus receipts	298 00
	$87,153 00

RECEIVED.

For Accrued interest of bonds sold	$298 00	

EXPENDED.

For interest on Funded Water Loan		
Coupons	$66,680 00	
Registered	18,055 00	
		84,735 00
Balance unexpended		$2,418 00

WATER WORKS.—MAINTENANCE.

Appropriation	$45,000 00
Surplus Receipts	567 00
	$45,567 00
Transferred to Fresh Pond Land Account	1,500 25
	$44,066 75

RECEIVED.

For sale of old pump	$500 00	
Sundry receipts	67 00	
		$567 00

EXPENDED.

For Belmont tax	$24 00	
Carpenter work	498 35	
Carriage hire	58 50	
Car tickets	304 51	
Catch basin and drains	286 85	
Coppering bridge	37 00	
Electric lighting outfit	471 00	
Expense of entertaining City Council and invited guests at Fresh Pond and Stony Brook, Nov. 14, 1889	420 00	
Expressage	50 22	
Gas lighting	172 44	
Horse	200 00	
Horse shoeing and clipping	123 44	
Iron work	232 19	
Labor, as per pay-rolls	17,763 13	
Mason and stone work	157 00	
Medical attendance to injured man	13 00	
Meters and repairs	48 25	
Mounting and binding plans	11 50	
Amounts carried forward	$20,871 38	$44,066 75

	Amounts brought forward .	$20,871 38	$44,066 75
For	Newspapers	8 50	
	Plumbing	56 55	
	Painting, glazing, etc . .	461 01	
	Professional services of consulting Engineer M. M. Tidd.	50 00	
	Rent of box in Safe Deposit Trust Co. . . .	40 00	
	Rent of office and shop .	600 00	
	Rent of stable . . .	12 00	
	Roofing	69 30	
	For salaries of,—		
	Sup't., Hiram Nevons .	2,085 70	
	Engineer, E. C. Brooks .	1,499 11	
	Foreman, J. L. Harrington	1,196 68	
	Registrar and Clerk, W. H. Harding . . .	2,065 68	
	Office Clerk, H. L, Lincoln	912 14	
	Temporary Clerk, Hattie F. Milligan . . .	455 25	
	Supplies,—		
	Castings	130 93	
	Engine	264 79	
	Fuel	4,479 66	
	Grass seed	66 21	
	Hardware, tools and repairs .	977 32	
	Harness and repairs . .	299 85	
	Hay and grain . . .	490 67	
	Hose and repairs . . .	156 71	
	Indicator	45 15	
	Levelling Instrument . .	25 00	
	Lumber, lime and cement .	1,685 49	
	Pipe and Fittings . .	1,106 77	
	Stationery, printing and postage	386 83	
	Amounts carried forward	$40,498 68	$44,066 75

Amounts brought forward .	$40,498 68	$44,066 75
Sundry	142 45	
Teaming and rolling . .	1,552 68	
Telephone, rent and tolls .	196 90	
Travelling expenses of Superintendent . . .	88 55	
Use of horse . . .	19 00	
Veterinary Surgeon . .	8 50	
Wagon repairs . . .	96 44	
		$42,603 20
Balance unexpended		$1,463 55

WATER WORKS, RATES, FINES, ETC.

RECEIVED.

For water rates, fines, etc., from sundry persons	$227,365 51

EXPENDED.

For Abatements	$3,866 91	
Construction . . .	41,237 23	
Fresh Pond Land . . .	1,500 25	
Interest	84,437 00	
Maintenance . . .	42,036 20	
Refunds	16,28 90	
Sinking Funds . . .	52,659 02	
		$227,365 51

WATER WORKS, RATES, FINES, ETC.—(ABATEMENTS.)

Appropriation	$4,000 00

EXPENDED.

For abatements of Water Rates . . .	$3,866 91
Balance unexpended	$133 09

WATER WORKS, RATES, FINES, ETC.—(REFUNDS.)

Appropriation	$2,500 00

EXPENDED.

For Refunds of Water Rates	1,628 90
Balance unexpended	$871 10

WATER WORKS.—(SINKING FUNDS.)

Appropriation	$51,705 00
Surplus receipts of Water Works . . .	3,312 00
	$55,017 00

EXPENDED.

For amount due the Trustees of the Sinking Funds of Water Works	$55,017 00

WATER WORKS.—(SUPPLIES.)

Appropriation	$4,800 00
Surplus receipts	3,295 57
	$8,095 57

RECEIVED.

For Supply pipes, fittings and labor	$8,295 57	

EXPENDED.

For Labor, as per pay-rolls . .	$2,939 50	
Pipes, Fittings, etc. . .	2,897 79	
Plumbing	60 38	
		$5,897 67
Balance unexpended		$2,197 90

WATER WORKS, SUPPLIES.—(ABATEMENTS.)

Appropriation	$200 00
EXPENDED.	
For abatements of supply bills	39 82
Balance unexpended	$160 18

Cambridge Water Works in account with the City of Cambridge, for the year ending, Nov. 30, 1889: —

RECEIPTS AND EXPENDITURES.

Balance in the City Treasury to the credit of Water Works accounts, Nov. 30, 1888:		EXPENDED.	
Fresh Pond Land . .	$1,268 78	For Fresh Pond Land .	$2,686 06
Stony Brook	15,403 23	Stony Brook . . .	26,030 39
Total	$16,672 01	Abatement of Rates, fines, etc. . . .	3,866 91
RECEIVED.		Abatement of Supplies	39 82
From sale of bonds . .	$20,000 00	General Construction	41,836 64
Premium and accrued interest .	2,160 00	Interest on Loan .	84,735 00
Other revenue on bond accounts .	756 66	Maintenance . . .	42,603 20
Revenue on construction account	599 41	Refunds	1,628 90
Revenue on maintenance account	567 00	Sinking Funds . .	51,705 00
Revenue from rates, fines, etc. . . .	227.365 51	Sinking Funds Surplus Receipts . .	3,312 10
Revenue from supplies	8,295 57	Supplies	5,897 67
		*Balance carried over	12,074 47
	$276,416 16		$276,416 16

*Balance brought forward to the credit of the Cambridge Water Works, Nov. 30, 1889: —

Water Works (Construction, Fresh Pond Land)	$727 97
Water Works (Construction, Stony Brook)	11,346 50
	$12,074 47

CITY OF CAMBRIDGE.

DEC. 31, 1889.

To the Honorable, the City Council of the City of Cambridge: —

The undersigned report that they have attended to their duties as prescribed by the City Ordinances. The books and accounts of the Auditor of Accounts have been examined from time to time, and are kept in accordance with our directions, being in excellent condition and correct.

Respectfully submitted,

FRANK H. TEELE,
CHARLES L. FULLER,
WILLIAM T. PIPER,
CHARLES F. SANBORN,
JOHN R. FAIRBAIRN,
Committee on Accounts.

REPORT

OF

THE COMMITTEE ON FINANCE.

THE Committee on Finance respectfully submits the following as its final report for the financial year ending Nov. 30, 1889.

Agreeably to the provisions of the city ordinances, the annual estimates of the ways and means of the city for the year 1889 were reported to the City Council in the month of February last, the aggregate being as follows: —

RECAPITULATION OF ESTIMATES.

	Expenses.	Revenue.	Appropriation.
Total estimates, City Department accounts, including cash in the Treasury	$1,352,181 33	$374,404 02	$977,777 31
Total estimates, Water Department accounts	246,232 01	229,560 00	16,672 01
Grand totals	$1,598,413 34	$603,964 02	$994,449 32
Amount of estimated expenses, as before recited		$1,598,413 34	
Allowance for estimated uncollected taxes *of the year 1889*, remaining uncollected as of Nov. 30, 1889		80,000 00	
Total appropriations and liabilities			1,678,413 34
LESS			
Estimated revenue of all kinds, and Cash in the Treasury, as hereinbefore recited			603,964 02
Leaving an amount to be provided for of			$1,074,449 32

The Committee recommended that this amount be provided for as follows:—

1.	By the issue of City Loan Bonds, viz.:—		
	Harvard Bridge Loan (for completing Harvard Bridge and Front Street) . .	$115,000 00	
	Sewer Loan (for Sundry Trunk Sewers) . .	22,000 00	
	Street Widening Loan (for Widening of Brattle Street)	6,000 00	
		$143,000 00	
2.	By assessment upon the polls and estates of the inhabitants of Cambridge, etc., for the current year, being the amount required for municipal expenses for the year. (The State Tax and County Tax to be added hereto by the Assessors, according to law)	931,450 00	
	Total		$1,074,450 00

The foregoing estimates were adopted by the City Council as reported. To the amount before stated as necessary to be raised by assessment upon the polls and estates of the inhabitants of Cambridge viz: $931,450 00
There was added by the Assessors the gross sum of 156,188 51
Total amount of the Assessors' warrants $1,087,638 51

The following special appropriations were made at various times, in addition to those reported at the beginning of the year: —

For Putnam school-house completion (additional) . . .	$15,000 00
English High School-house	200,000 00
Water Works accounts	47,500 00
Total	$262,500 00

Bonds of the City of Cambridge were issued and negotiated by this committee as follows: —

Harvard Bridge Loan. One hundred and fifteen Coupon Bonds, dated March 1, 1889, payable in thirty years, at 4 per cent. interest . .	$115,000 00	
Premium received	12,418 85	
		$127,418 85
Water Loan. Eighteen Coupon Bonds, dated July 1, 1889, payable in twenty years, at 4 per cent. interest	$18,000 00	
Registered Bond of same date, time of payment, and rate of interest	2,000 00	
Premium received	1,862 00	
		$21,862 00
Amount carried forward . .		$149,280 85

Amount brought forward . . .		$149,280 85
Sewer Loan. Twenty Coupon Bonds, dated Nov. 1, 1889, payable in twenty years at 4 per cent. interest	$20,000 00	
Registered Bond of same date, time of payment, and rate of interest	2,000 00	
Premium received on Coupon Bonds . . .	1,862 00	
		23,862 00
Street Widening Loan. Eight Coupon Bonds, dated Nov. 1, 1889, payable in ten years at 4 per cent. interest	8,000 00	
Premium received	412 00	
		8,412 00
Total amount received		$181,554 85
Less premium received		16,554 85
Total amount of bonds negotiated . . .		$165,000 00

Alderman John H. Corcoran and Councilmen Edward C. Wheeler and Charles F. Sanborn were appointed a sub-committee to count the cash in the City Treasury at the close of business, Nov. 30. Their report is as follows: —

CITY OF CAMBRIDGE, Dec. 16, 1889.

To the Committee on Finance: —

The sub-committee appointed to count and examine the cash in the hands of the Treasurer at the close of business on Nov. 30, 1889, would respectfully report: —

Nov. 30, 1889. Actual cash in Treasurer's office .		$1,415 38
A certificate from W. A. Bullard, Cashier of First National Bank, showing a balance, to the credit of the Treasurer, of	$179,072 64	
From this balance should be deducted one (1) check given by the Treasurer prior to Nov. 30, but not received by the Bank, amounting to . . .	48,004 79	
Leaving a balance in Bank, as shown by the Treasurer's books, of		131,067 85
Making the total cash on hand . . .		$132,483 23

Amount brought forward		$132,483 23
Dec. 16, 1889. After certain additional entries were made belonging to the financial year of 1889, your committee found receipts and expenditures as follows:—		
Receipts.		
For Sale of Sewer Bonds	$20,000 00	
For Sale of Street Widening Bonds . . .	8,000 00	
For premium on Sewer Bonds, $9\frac{31}{100}$ per cent. . .	1,862 00	
For premium on Street Widening Bonds, $5\frac{15}{100}$ per cent.	412 00	
For accrued interest on Sewer and Street Widening Bonds	105 78	
From the Commonwealth—Corporation Tax . .	48,762 49	
From the Commonwealth—National Bank Tax .	16,447 65	
From the Commonwealth—State Aid . . .	9,993 50	
From Street Department Repairs—work done on Brattle Street, widening	1,660 00	
From West End Street Railway Company, repairs to sundry streets	5,359 10	
Total		$112,602 52
Which amount added to the Treasurer's balance of Nov. 30, 1889, makes a total of . . .		$245,085 75
Expenditures.		
Authorized additional payments as of Nov. 30, and verified by the Auditor's books as follows:		
Pay-Rolls for the last week of November . .	$6,473 51	
Street Department, Widening Brattle Street . .	1,660 00	
State Tax for 1889	61,920 00	
National Bank Tax—refunding of taxes on non-resident owners	6,223 23	
Surplus in running account of the Water Works, paid to the Trustees of the Water Loan Sinking Fund	3,312 10	
		79,588 84
Showing a balance of cash in the Treasurer's hands, as of Nov. 30, 1889, of		$165,496 91

Your Committee would further state that so far as it was possible, their figures have been verified by an examination of the Auditor's books.

Respectfully submitted,

JOHN. H. CORCORAN,
EDW. C. WHEELER.

Accompanying the foregoing report was the following certificate of deposit:

FIRST NATIONAL BANK.

CAMBRIDGEPORT, MASS., Nov. 30, 1889.

To the Treasurer of the City of Cambridge.

DEAR SIR: —

The balance standing to your credit on the books of this Bank at the close of business to-day is One Hundred Seventy-nine Thousand Seventy-two and Sixty-four hundredths Dollars ($179,072.64).

Respectfully yours,

W. A. BULLARD,
Cashier.

The following tables are compiled from the assessors' books. The valuations are given in the several wards of the city, and are not presented in this form in the report of the Auditor of Accounts. The figures are those included in the first warrant of the assessors, and do not include subsequent changes.

POLLS AND VALUATION OF POLLS AND ESTATES, MAY 1, 1887.

Wards.	Polls.	Valuation of Polls.	Personal.	Real Estate.	Total, Real and Personal	Houses	Total Tax.
1.....	2,736	$5,472 00	$5,954,510	$11,800,000	$17,754,510	1,933	$289,544 16
2.....	4,857½	9,715 00	3,280,290	11,680,900	14,961,190	2,604¾	249,094 04
3.....	3,281½	6,563 00	1,403,110	7,298,000	8,701,110	1,446	145,780 76
4.....	4,330½	8,661 00	1,677,400	9,576,000	11,253,400	2,611	188,715 40
5.....	1,899½	3,799 00	995,000	5,987,600	6,982,600	1,167	115,520 60
Total...	17,105	$34,210 00	$13,310,310	$46,342,500	$59,652,810	9,761¾	$988,654 96

POLLS AND VALUATION OF POLLS AND ESTATES, MAY 1, 1888.

Wards.	Polls.	Valuation of Polls.	Personal.	Real Estate.	Total, Real and Personal	Dwellings.	Total Tax.
1.....	2,859¾	$5,719 50	$6,417,715	$12,581,600	$18,999,315	1,981	$290,709 22½
2.....	5,035¾	10,071 50	3,485,715	11,912,700	15,398,415	2,629	241,047 72½
3.....	3,295¾	6,591 50	1,456,110	7,506,500	6,962,610	1,461	141,030 65
4.....	4,489	8,978 00	1,782,900	9,779,800	11,562,700	2,621	182,418 50
5.....	1,878½	3,757 00	1,099,200	6,427,800	7,527,000	1,235	116,662 00
Total...	17,558½	$35,117 50	$14,241,640	$48,208,400	$62,45 0,040	9,927	$971,868 10

POLLS AND VALUATION OF POLLS AND ESTATES, MAY 1, 1889.

Wards.	Polls.	Valuation of Polls.	Personal.	Real Estate.	Total, Real and Personal	Dwellings.	Total Tax.
1.....	2,919	$5,838 00	$6,156,180	$12,983,800	$19,139,980	1,969	$312,077 68
2.....	5,199½	10,399 00	3,795,790	12,443,300	16,239,090	2,734	270,224 44
3.....	3,392	6,784 00	1,482,730	7,724,500	9,207,230	1,513	154,099 68
4.....	4,785½	9,571 00	2,070,200	10,398.100	12,468,300	2,705	209,063,80
5.....	1,962	3,924 00	1,344,800	6,733,400	8,078,200	1,301	133,175 20
Total...	18,258	$36,516 00	$14,849,700	$50,283,100	$65,132,800	10,222	$1,078,640 80

N. B.— The amount of the non-resident Bank Tax and the tax upon supplementary warrants, are not included in the amounts stated as the total tax for the several years above mentioned. The valuation of the property assessed in the supplementary warrants for these years is not added to the total valuations as above given.

The valuations of estates in this city, for the years hereinbefore mentioned, are the same as originally made by the board of assessors, during those years, and the same figures were reported by that board to the Tax Commissioners for each of the years, respectively. These valuations were subject to changes in each year, after such report was made as shown by the following: —

Net valuations of estates in the City of Cambridge for the past three years, after adding the amounts of all supplementary warrants, and deducting therefrom all abatements.

Valuation for the year 1887	$58,738,376 25
Valuation for the year 1888	61,272,860 00
Valuation for the year 1889	63,989,105 62
Average net valuation per year for the three years before given	61,333,447 29

This last sum represents the amount upon which the limit of the rate of taxation, and also of municipal indebtedness, is fixed under the provisions of chapter 312 of the Acts of the year 1885.

Following is a statement showing the actual gain in the year 1889, in the polls, valuations and dwellings, after making the necessary corrections in the assessors' tables hereinbefore given. There were 22 additional polls at $2.00 each, and 110 additional at 50 cents each, or 27 1-2 at $2.00 each, making the total additions 49 1-2, and the whole number of polls 18,307 1-2.

Years.	Polls.	Valuation.	Dwellings.
1889	18,307½	$63,989,105 62	10,222
1888	18,086¼	61,272,860 00	9,927
Gain in 1889	220¾	$2,716,245 62	295

Various subjects of importance were considered by this committee during the year, among which was that of the application of the Rules of the Civil Service of this Commonwealth, in relation to the employment of city laborers. These rules are now in force in this city.

Other matters involving a considerable outlay of the public money were also before the committee, from time to time, among which were the subjects of the introduction of the Police Signal System, the widening of the draws of certain bridges, the rebuilding of the River Street bridge, an additional appropriation for the Harvard Bridge, and the purchase of an additional steam fire engine. All these matters have been sent forward for the consideration of the next City Council.

In this report it has been the purpose of the committee to present a brief review of its doings within the past financial year, giving herein such figures only as have been shaped mainly through its recommendations to the City Council. The tabulations from the assessors' books are given because not

presented elsewhere in this form. For more extended details, such as have heretofore formed a part of the annual report of the Committee on Finance, reference may be made to the Annual Report of the Auditor of Accounts.

HENRY H. GILMORE,
JOHN H. CORCORAN,
ALVIN F. SORTWELL,
GUSTAVUS GOEPPER,
EDWARD A. BINGHAM,
EDWARD C. WHEELER,
JOHN S. CLARY,
CHARLES F. SANBORN,
THOMAS HOULLAHAN,

Committee on Finance.

REPORT

OF THE

CITY TREASURER

FOR 1889.

OFFICE OF CITY TREASURER, Dec. 1, 1889.

To the Honorable the City Council:—

I herewith submit the annual report of the City Treasurer for the year ending Nov. 30, 1889.

Said report shows that the cash balance in the treasury Nov. 30, 1888, was	$179,942 98
The amount received into the treasury during the year ending Nov. 30, 1889, from all sources was	2,366,374 90
	$2,546,317 88
The authorized payments during the year were	2,380,820 97
Leaving a balance in the treasury Nov. 30, 1889, of	$165,496 91

Very respectfully,

WM. W. DALLINGER, *City Treasurer.*

CITY OF CAMBRIDGE IN ACCOUNT CURRENT FROM DEC. 1, 1888, TO

Dr.

To authorized payments charged to City Accounts as follows:

Abatements (Taxes)	$20,857 12
Bridge (Harvard)	99,760 56
Bridges	3,422 51
Bridges (West Boston, Craigie's and Prison Point)	6,417 17
Cambridge Cemetery	15,980 13
Cambridge Cemetery (Old Burial Ground, Ward One)	300 00
Cambridge Public Library	9,290 75
Cemetery Fund	2,214 50
City Buildings (Care and Repairs)	12,366 80
Discounts (Taxes)	28,081 09
Engineering	8,618 32
Fire Department	54,779 63
Health Department	3,080 44
Incidental Expenses	31,770 37
Interest	114,755 54
Interest on Water Loan	84,735 00
Lighting Streets	44,949 69
Loan (City)	100,000 00
Loan (Temporary)	490,000 00
Loan (Water)	112,000 00
Pauper Department	30,417 21
Pauper Department (Almshouse)	25,936 35
Pauper Department (House Offal)	18,010 98
Police Department	87,154 50
Salaries	27,841 65
School Department (Evening Schools)	15 00
School Department (Incidental Expenses)	661 24
School Department (Salaries)	184,776 26
School Department (Text Books and Stationery)	13,864 04
School-Houses (Care and Repairs)	35,599 58
School Houses (New and Furniture, Peabody)	20,635 74
School-Houses (Land, Ward Four)	6,000 00
School-Houses (New and Furniture, Putnam Completion)	14,400 00
School-Houses (New High)	4,654 35
Sewers (Construction)	29,936 15
Sewers (Construction, Front Street)	4,262 14
Sewers (Construction, Belmont)	3,886 80
Sewers (Construction, Bath Street)	11,490 42
Sewers (Maintenance)	19,274 60
Shade Trees and Public Grounds	4,519 14
Sinking Funds	65,435 00
Sinking Funds of Water Works	55,017 10
State Aid	13,585 68
Stationery and Printing	4,266 50
Street Department (Paving)	13,269 21
Street Department (Paving Broadway)	21,331 29
Street Department (North River Flagging Stone)	1,500 00
Street Department (Repairs)	112,731 54
Street Department (Repairs, Sea Wall)	2,001 02
Street Department (Watering)	15,494 90
Street Department (Grading and Filling Front Street)	21,177 78
Street Department (Widening Brattle Street)	5,912 64
Street Department (Widening Main Street)	2,743 75
Street Department (Widening Front Street)	14,235 00
Street Department (Extension Washington Avenue)	1,670 00
Street Department (Widening Inman Street)	250 00
Street Department (Extension De Wolf Street)	1,583 00
Tax (County)	48,004 79
Tax (National Bank)	7,006 48
Tax (State)	61,920 00
Water Works (Abatements, Rates, Fines, etc.)	3,866 91
Water Works (Abatements, Supply)	39 82
Water Works (Construction)	41,793 12
Water Works (Construction, Fresh Pond)	2,686 06
Water Works (Construction, Stony Brook)	26,239 10
Water Works (Refunds, Rates, Fines, etc.)	1,628 90
Water Works (Maintenance)	42,897 03
Water Works (Supplies)	5,818 58
Total Payments	$2,380,820 97
Cash balance in Treasury, Nov. 30, 1889	165,496 91
	$2,546,317 88

NOV. 30, 1889, (INCLUSIVE), WITH WM. W. DALLINGER, *City Treasurer.*

Cr.

Bridge (Harvard)	9,719 10
Bridges (West Boston, Craigie's, and Prison Point)	425 45
Cambridge Cemetery	17,207 26
Cambridge Public Library	3,936 84
Cemetery Fund	2,214 50
City Buildings (Care and Repairs)	1,992 84
City Lands	2,457 47
Commissioners of Sinking Fund	100,000 00
Engineering	91 00
Fire Department	421 69
Incidental Expenses	4,592 99
Interest	4,477 05
Interest on Water Loan	298 00
Lighting Streets	250 73
Loan ("Harvard Bridge")	115,000 00
Loan (Sewer)	22,000 00
Loan (Street Widening)	8,000 00
Loan (Temporary)	490,000 00
Loan (Water)	20,000 00
Notes Receivable	1,600 00
Pauper Department	3,839 12
Pauper Department (Almshouse)	10.147 25
Pauper Department (House Offal)	7,324 61
Police Department	4,873 23
Salaries	1,500 00
School Department (Salaries)	1,015 48
School Department (Text Books and Stationery)	254 70
School-Houses (Care and Repairs)	141 79
Sewers (Construction)	14,273 17
Sewers (Construction, Belmont)	5 25
Sewers (Construction, Bath Street)	54 23
Sewers (Maintenance)	2,001 85
State Aid	10,065 50
Stationery and Printing	30 10
Street Department (Paving)	2,928 03
Street Department (Repairs)	8,380 25
Street Department (Watering)	12,337 64
Street Department (Grading and Filling Front Street)	2,699 75
Street Department (Widening, Betterments)	1,026 00
Street Department (Widening Brattle Street)	412 00
Tax (Corporation)	53,775 05
Tax (Lien Account)	357 28
Tax (National Bank)	16,447 65
Taxes, 1881	2 00
Taxes, 1882	2 00
Taxes, 1883	11 28
Taxes, 1884	6 00
Taxes, 1885	550 60
Taxes, 1886	829 00
Taxes, 1887	1,682 00
Taxes, 1888	60,623 40
Taxes, 1889	992,588 90
Tax Sale Surplus	58 72
Trustees of Water Loan Sinking Fund	112,000 00
Water Works Construction	599 41
Water Works (Construction, Stony Brook)	1,973 66
Water Works (Construction Fresh Pond)	645 00
Water Works (Maintenance)	567 00
Water Works (Rates, Fines, etc.)	227,365 51
Water Works (Supplies)	8,295 57
Total Receipts	$2,366,374 90
Cash balance in Treasury, Nov. 30, 1888	179,942 98
	$2,546,317 88

WM. W. DALLINGER, *City Treasurer.*

REPORT

OF THE

COMMISSIONERS OF THE SINKING FUNDS OF THE CITY OF CAMBRIDGE.

To the Honorable the City Council: —

THE undersigned Commissioners of the Sinking Funds of the City, herewith present their fourteenth annual report for the year ending Nov. 30, 1889.

Dr.

Amount of the funds Nov. 30, 1888	$499,968 28	
Amount received from the City of Cambridge in the annual appropriation for 1889, derived from taxation	65,435 00	
Amount of interest received on invested funds	22,002 78	
		$587,406 06

Cr.

Amount paid as accrued interest on bonds purchased for investment	$880 28	
Amount paid as premium on bonds purchased for investment	3,465 00	
Amount paid to the treasurer of the city to meet the bonds of the city, maturing April 1, 1889	100,000 00	
		$104,345 28
Leaving the amount of the funds Nov. 30, 1889, all securities taken at par		$483,060 78

SECURITIES BELONGING TO THE SINKING FUNDS NOV. 30, 1889.

Cambridge Water Loan, six per cent. bonds, maturing July 1, 1892	$1,000 00
Cambridge City Loan, five per cent. bonds maturing Jan. 1, 1893	1,000 00
Amount carried forward	$2,000 00

Amount brought forward	$2,000 00	
Cambridge Paving Loan, six per cent. bonds, maturing July 1, 1893	17,000 00	
Cambridge Paving Loan, six per cent. bonds, maturing July 1, 1894	2,000 00	
Cambridge Sewer Loan, six per cent. bonds maturing July 1, 1896	11,000 00	
Cambridge Street Widening Loan, six per cent. bonds maturing July 1, 1904	90,000 00	
Cambridge Sewer Loan, six per cent. bonds, maturing July 1, 1904	2,000 00	
Cambridge Street Widening Loan, six per cent. bonds, maturing July 1, 1905	14,000 00	
Cambridge Sewer Loan, six per cent. bonds, maturing July 1, 1905	49,000 000	
		$187,000 00
Town of Brookline, $3\frac{65}{100}$ per cent. bonds maturing Feb. 1, 1890	$10,000 00	
Town of Hyde Park, four per cent. bonds, maturing Nov. 1, 1890	2,000 00	
Town of Brookline, $3\frac{65}{100}$ per cent. bonds, maturing Feb. 1, 1891	7,000 00	
City of Cleveland, 4 per cent. bonds, maturing Oct. 1, 1891	14,000 00	
City of Dayton, five per cent. bonds, maturing Nov. 1, 1891	2,000 00	
Town of Hyde Park, four per cent. bonds, maturing Nov. 1, 1891	2,000 00	
Town of Brookline, $3\frac{65}{100}$ per cent. bonds, maturing Feb. 1, 1892	9,000 00	
Town of Hyde Park, four per cent. bonds, maturing Nov. 1, 1892	2,000 00	
Town of Brookline, $3\frac{65}{100}$ per cent. bonds, maturing Feb. 1, 1893	8,000 00	
City of Cleveland, four per cent. bonds, maturing April 1, 1893	2,000 00	
Town of Brookline, four per cent. bonds, maturing July 1, 1893	3,000 00	
City of Brockton, four per cent. bonds, maturing July 1, 1893	2,500 00	
City of Cleveland, four per cent. bonds, maturing Oct. 1, 1893	3,000 00	
Town of Hyde Park, four per cent. bonds, maturing Nov. 1, 1893	2,000 00	
Town of Brookline, $3\frac{65}{100}$ per cent. bonds, maturing Feb. 1, 1894	7,000 00	
Town of Brookline, four per cent. bonds, maturing July 1, 1894	3,000 00	
City of Brockton, four per cent. bonds, maturing July 1, 1894	2,500 00	
Amounts carried forward	$81,000 00	$187,000 00

Amounts brought forward	$81,000 00	$187,000 00
Town of Hyde Park, four per cent. bonds maturing Nov. 1, 1894	2,000 00	
City of Fitchburg, four per cent. bonds, maturing Nov. 1, 1894	3,500 00	
Town of Brookline, $3\frac{65}{100}$ per cent. bonds, maturing Feb. 1, 1895	1,000 00	
City of Brockton, four per cent. bonds, maturing July 1, 1895	2,500 00	
City of Dayton, four per cent. bonds, maturing Oct. 1, 1895	7,000 00	
Town of Hyde Park, four per cent. bonds, maturing Nov. 1, 1895	2,000 00	
City of Dayton, four per cent. bonds, maturing Oct. 1, 1896	7,000 00	
Town of Hyde Park, four per cent. bonds, maturing Nov. 1, 1896	2,000 00	
City of Fitchburg, four per cent. bonds, maturing Nov. 1, 1896	2,000 00	
City of Waltham, four per cent. bonds, maturing Jan. 1, 1897	6,000 00	
City of New Bedford, $3\frac{1}{2}$ per cent. registered bond, maturing April 1, 1897	15,000 00	
City of Dayton, four per cent. bonds, maturing Oct. 1, 1897	7,000 00	
Town of Hyde Park, four per cent. bonds, maturing Nov. 1, 1897	2,000 00	
City of Fitchburg, $3\frac{1}{2}$ per cent. registered bond, maturing April, 1, 1898	10,000 00	
City of Cleveland, four per cent. bonds, maturing Sept. 1, 1898	1,000 00	
City of Dayton, four per cent. bonds maturing Oct. 1, 1898	4,000 00	
City of Providence, $4\frac{1}{2}$ per cent. bonds, maturing June 1, 1899	64,000 00	
City of Cleveland, $3\frac{65}{100}$ per cent. bonds, maturing Sept. 1, 1902	1,000 00	
City of Lawrence, four per cent. bonds, maturing July 1, 1904	12,000 00	
City of Pawtucket, four per cent. bonds maturing July 1, 1904	15,000 00	
Town of Hopkinton, four per cent. bonds, maturing Sept. 30, 1904	5,000 00	
City of Pawtucket, four per cent. bonds, maturing July 1, 1909	30,000 00	
Town of Beverly, four per cent. bonds, maturing July 1, 1911	9,000 00	
City of Brockton, $3\frac{1}{2}$ per cent. bonds, maturing July 1, 1916	5,000 00	$296,000 00
		$483,000 00
Cash in Bank		$60 78
		$483,060 78

The bonded city debt, which the foregoing sinking funds are expected to pay, matures as follows, viz: —

July 1, 1890, City Loan bonds, six per cent.	$20,000 00
July 1, 1893, City Loan bonds, five per cent. gold	150,000 00
July 1, 1893, Land Loan bonds, six per cent.	10,000 00
July 1, 1893, Paving Loan bonds, six per cent.	100,000 00
July 1, 1893, Street Loan Bonds, six per cent.	13,000 00
July 1, 1894, Paving Loan bonds, six per cent.	130,000 00
April 1, 1895, Municipal Loan bond, four per cent.	200,000 00
July 1, 1895, Paving Loan bonds, six per cent.	25,000 00
Oct. 1, 1895, Sewer Loan bonds, six per cent.	20,000 00
July 1, 1896, Sewer Loan bonds, six per cent.	29,000 00
Nov. 1, 1896, Sewer Loan bonds, six per cent.	25,000 00
Aug. 1, 1898, City Hall Land Loan bonds, four per cent.	83,000 00
Nov. 1, 1899, Street Widening Loan, four per cent.	8,000 00
July 1, 1903, Sewer Loan bonds, six per cent.	136 000 00
July 1, 1903, Street Widening Loan bonds, six per cent.	10,000 00
July 1, 1904, Sewer Loan bonds, six per cent.	295,000 00
July 1, 1904, Street Widening Loan bonds, six per cent.	90,000 00
July 1, 1905, Sewer Loan bonds, six per cent.	144,000 00
July 1, 1905, Street Widening Loan bonds, six per cent.	14,000 00
Aug. 1, 1905, Cambridge Cemetery Extension Loan bond, four per cent.	65,000 00
Nov. 1, 1907, Sewer Loan bond, four per cent.	30,000 00
Nov. 1, 1909, Sewer Loan, four per cent.	22,000 00
Oct. 1, 1917, Harvard Bridge Loan bond, four per cent.	10,000 00
July 1, 1918, Harvard Bridge Loan bonds, four per cent.	100,000 00
Sept. 1, 1918, Harvard Bridge Loan bonds, four per cent.	50,000 00
Sept. 1, 1918, Harvard Bridge Loan bonds (Front Street extension), four per cent.	50,000 00
March 1, 1919, Harvard Bridge Loan bonds, four per cent.	90,000 00
March 1, 1919, Harvard Bridge Loan bonds (Front street), four per cent.	25,000 00
	$1,944,000 00

The funded debt of the city has increased during the year, $145,000.00, for which four per cent. bonds have been issued as follows, viz.: For the new "Harvard Bridge" and Front Street extension, $115,000.00, dated March 1st, 1889, and payable in thirty years; for building trunk sewers, $22,000.00, dated Nov. 1st, 1889, and payable in twenty years; for the widening of Brattle Street, $8,000.00, dated Nov. 1st, 1889, and payable in ten years; city bonds issued on account of the war, April 1st, 1864, to the amount of $100,000.00, became due April 1st, and were paid from the fund. Deducting this amount paid, from above issued bonds, leaves the net increase of debt for the year,

$45,000.00. The amount of city debt now outstanding, is $1,944,000.00, from which deduct the present amount of the Sinking Fund assets, at par $483,060.78, shows the net liability for bonded debt, Dec. 1st, 1889 (exclusive of water debt) $1,460,939.22, or about 2 1-4 per cent. of the present valuation. It is a gratifying feature of the result of this fund, that of the large amount of debt which has matured since 1876, amounting to $2,250,000.00, all of this amount has been paid from this fund without (in any case) a re-issue of bonds or a renewal of the debt. The assessed valuation of the city for 1889, is $65,020,000.00, showing an increase for the year of $2,570,000.

Respectfully submitted,

CHAS. H. SAUNDERS,
FRANK A. ALLEN,
JOHN C. BULLARD,
A. J. LOVELL,
JOS. A. HOLMES,
GEO. H. HOWARD,

Commissioners of the Sinking Funds of the City of Cambridge.

CAMBRIDGE, Dec. 18, 1889.

REPORT

OF THE

TRUSTEES OF THE SINKING FUND OF THE CAMBRIDGE WATER WORKS.

To the Honorable, the City Council :—

THE undersigned, Trustees of the Sinking Fund of the Cambridge Water Works, herewith submit their annual report of the fund committed by law to their charge :—

Dr.

The amount of the fund at the date of the last report, Nov. 30, 1888, was	$753,942 00	
Amount received from the City Treasurer of Cambridge, the same having been derived from the annual water rates, and being three per cent. on the amount of outstanding Water loan bonds	51,705 00	
Amount received as *surplus* in the running accounts of the Water Works for the year ending Nov. 30, 1889	3,312 10	
Amount of interest received on investments	32,382 05	
Amount of premium received in the sale of securities	1,395 00	
		$842,736 15

Cr.

Amount paid the City Treasurer of Cambridge with which to meet the Water Loan bonds which matured May 1, 1889	$112,000 00	
Amount paid the City of Cambridge, interest for advance payments to meet the maturing debt	819 40	
Amount paid as accrued interest on bonds purchased for investment	293 22	
Amount paid as premium on bonds purchased for investment	965 00	
Balance, representing the amount of the fund Nov. 30, 1889, all securities estimated at par.	728,658 53	
		842,736 15

SECURITIES BELONGING TO THE SINKING FUND OF THE WATER WORKS, NOV. 30th, 1889.

Cambridge Water Loan, six per cent. bonds, maturing July 1, 1890	$31,000 00	
Cambridge Water Loan, six per cent. bonds, maturing May 1, 1891	26,000 00	
Cambridge Water Loan, six per cent. bonds, maturing July 1, 1892	7,000 00	
Cambridge Water Loan, four per cent. bonds maturing Nov. 1, 1894	6,000 00	
Cambridge Water Loan, six per cent. bonds, maturing April 1, 1895	37,000 00	
Cambridge Water Loan, three and one-half per cent. registered bonds, maturing after April 1, 1896	100,000 00	
Cambridge Water Loan, three and one-half per cent. registered bonds, maturing after July 1, 1896	75,000 00	
Cambridge Water Loan, six per cent. bonds, maturing July 1, 1896	46,000 00	
Cambridge Water Loan, six per cent. bonds, maturing July 1, 1897	16,000 00	
Cambridge Water Loan, five per cent. bond, maturing July 1, 1898	12,500 00	
Cambridge Contingent Loan, four per cent. Note, dated Dec. 1, 1883	200,000 00	
		$556,500 00
Town of Southboro, four per cent. bonds, maturing March 25, 1890	$6,000 00	
Town of Hyde Park, four per cent. bonds, maturing July 1, 1891	5,000 00	
City of Salem, four per cent. bonds, maturing July 1, 1892	17,000 00	
Town of Arlington, five per cent. bonds, maturing July 1, 1898	12,000 00	
City of Boston, four per cent. bonds, maturing Jan. 1, 1899	50,000 00	
City of Lynn, four per cent bond, maturing July 1, 1899	11,000 00	
City of Boston, four per cent. bond, maturing April 1, 1900	4,000 00	
City of Cleveland, O., three and sixty-five hundreds per cent. bonds, maturing Sept. 1, 1902	3,000 00	
City of Providence, five per cent. bonds, maturing July 1, 1906	50,000 00	
Town of Winchester, four per cent. bonds, maturing May 1, 1908	10,000 00	
		168,000 00
		$724,500 00
Cash in Bank		4,158 53
		$728,658 53

The bonded water debt which the foregoing fund is expected to pay, matures as follows, viz : —

July 1, 1890, six per cent. coupon	$60,000 00
May 1, 1891, six per cent. coupon	50,000 00
July 1, 1892, six per cent. coupon	335,000 00
April 1, 1894, six per cent. coupon	150,000 00
Nov. 1, 1894, four per cent. coupon	36,000 00
April 1, 1895, six per cent. coupon	160,000 00
April 1, 1896, 3½ per cent. registered (or to April 1, 1911)	100,000 00
July 1, 1896, six per cent. coupon	103,000 00
July 1, 1896, 3½ per cent. registered (or to July 1, 1911)	75,000 00
July 1, 1897, six per cent. coupon	16,000 00
July 1, 1898, five per cent. registered	12,500 00
Nov. 1, 1906, 3½ per cent. registered	43,000 00
Oct. 1, 1907, four per cent. registered	75,000 00
Oct. 1, 1907, four per cent. registered	15,000 00
Nov. 1, 1907, four per cent. registered	22,000 00
July 1, 1908, four per cent. coupon	46,000 00
Aug. 1, 1908, four per cent. coupon	25,000 00
Nov. 1, 1909	20,000 00
May 1, 1910, four per cent. registered	133,000 00
May 1, 1910, four per cent. coupon	155,000 00
Total funded water debt	$1,631,500 00

The bonded debt has been reduced during the year by the payment of $112,000.00 of bonds which matured May 1st. $20,000.00 of new bonds have been issued for Stony Brook extension, making the amount of outstanding bonds $92,000 less than one year ago.

HENRY H. GILMORE,
EDWARD A. BINGHAM,
WM. W. DALLINGER,
} *Trustees of the Sinking Fund of the Cambridge Water Works.*

REPORT

OF THE

TRUSTEES OF THE DOWSE INSTITUTE

To the Honorable City Council of Cambridge: —

THE Board of Trustees of the Dowse Institute respectfully reports that a course of six lectures, with one reading and a concert, was given in Union Hall, Cambridgeport, beginning Nov. 3, 1888, and ending Dec. 27, 1888.

An attested copy of the accounts of the Treasurer is herewith transmitted, showing the amount of receipts and expenditures.

W. W. WELLINGTON,
W. A. BULLARD,
FRANK A. ALLEN,
HENRY H. GILMORE,
EDWARD A. BINGHAM,
} *Board of Trustees.*

CAMBRIDGE, Dec. 31, 1889.

W. A. BULLARD, TREASURER, IN ACCOUNT WITH DOWSE INSTITUTE.

1888.	*Dr.*		
To Balance		$2 09	
City of Cambridge, for one year's interest on fund . .		600 00	
Sale of tickets to course of entertainments		869 50	
			$1,471 59

1888. *Cr.*

Nov. 3.	By am't paid	H. C. Barnabee, W. H. Fessenden, Mr. Dow, and Olive Mead, for concert	$195	00	
" 27.	"	" Henry A. Clapp, for three lectures,	200	00	
Dec. 4.	"	" T. W. Higginson, for a lecture .	50	00	
" 11.	"	" Prof. J. W. Churchill, for a reading,	80	00	
" 18.	"	" Mary Gregory, for a lecture . .	52	00	
" 27.	"	" John D. Long, for a lecture . .	50	00	
	"	" F. L. Beunke, for advertising .	3	75	
	"	" F. M. Buffum, " " . .	9	50	
	"	" Geo. E. French, " " . .	2	25	
	"	" Boston Herald, " " . .	8	00	
	"	" Boston Globe, " " . .	8	00	
	"	" Cambridge Tribune, for advertising,	15	00	
	"	" Cambridge News, " "	20	00	
	"	" Cambridge Press, " "	19	00	
	"	" Cambridge News, " "	19	00	
	"	" Cambridge Chronicle, " "	30	00	
	"	" E. W. Blake, " "		75	
	"	" John Ford & Son, for printing .	55	00	
	"	" M. J. Fairbanks, for carriage hire .	2	00	
	"	" F. M. Buffum, door-keeper, . .	8	00	
	"	" A. F. Buffum, " . .	5	00	
	"	" C. L. Russell, " . .	8	00	
	"	" Ralph Stevens, ticket seller . .	8	00	
	"	" Union Hall Ass'n, rent of hall .	320	00	
Balance			303	34	
					$1,471 59

ATTEST, W. A. BULLARD, *Treasurer.*

REPORT

OF THE

TRUSTEES OF THE BRIDGE CHARITABLE FUND.

To the Honorable City Council: —

THE thirteenth annual Report of the Trustees of the Bridge Charitable Fund is herewith submitted.

The sum representing this fund is on deposit at the Cambridgeport Savings Bank.

The amount on deposit to the credit of the fund, July 19, 1888, was	$2,455 35
Interest to July 19, 1889	99 18
Amount on deposit, Nov. 30, 1889	$2,554 53

Inasmuch as, under the provisions of the Bridge bequest, two-thirds of the interest accruing to the fund is payable to the Overseers of the Poor, the sum before mentioned should be reduced by the deduction of the amount due that Board.

For full information in reference to the object of the fund, the Trustees would refer those interested to the history of the same, to be found in former city documents.

HENRY H. GILMORE,
EDWARD A. BINGHAM,
CHAS. L. FULLER,
} *Trustees.*

REPORT

OF THE

TRUSTEES OF THE SANDERS TEMPERANCE FUND.

THE twenty-fourth annual report of the Trustees of the Sanders Temperance Fund is herewith respectfully submitted.

In reference to the use of this fund, but little can be said, except in repetition of the substance of former reports. The terms of the Sanders bequest have been complied with in years past, in the appointment of a missionary for temperance work in this city.

Mr. Alonzo Stewart, who has filled this position for many years, has been reappointed by the present Trustees, and he has continued to labor with unabated zeal and efficiency, in the cause which lies so near his heart. The Trustees feel confident that the efforts of the missionary have been productive of lasting good in our community. A full history of this fund may be found in the city reports of former years.

HENRY H. GILMORE,
EDWARD A. BINGHAM,
WM. T. NEILON,
WILLIAM T. PIPER,
THOS. HOULLAHAN,
} *Trustees.*

REPORT

OF THE

SANDERS TEMPERANCE FUND MISSIONARY.

JAN. 1, 1890.

GENTLEMEN: — The old year with its joys and sorrows, its good and bad deeds, its successes and failures, is among the things that were, but are not. The recording angel declares "What I have written, I have written;" the books are sealed and no changes can be made; no mistakes rectified.

Though almost discouraged that so little, seemingly, has been accomplished during the year, yet I have the consciousness of having striven at all times and under all circumstances, to carry out the wishes of the Trustees; truly, "The *duty* is man's, but the *result* is God's."

In prosecuting my work, I have pursued the same line of labor as in former years; should any other course be considered desirable, I will gladly heed any suggestions.

I have labored earnestly to reclaim the drunkard, and to stay the steps of those just entering the downward path. With this end in view, I have made direct appeals to more than one thousand persons addicted to the use of strong drink; have solicited and distributed about forty thousand pages of temperance and religious reading among the inmates of the Jail, House of Correction and Almshouse. Whether any good has resulted, time only can reveal.

I have conducted religious services in the woman's department every Sabbath morning one hour, subsequent to that held in the chapel of the House of Correction; have administered the pledge of total abstinence to all, who, in my judgment, would be helped thereby to resist temptation. I have carefully

considered all cases brought before the court for drunkenness and its attending evils, and have endeavored to pursue such a course of treatment as seemed best for the individuals and the community.

The work is, and ever has been, dear to my heart: it has, indeed, been my *life work*, though attended by many mistakes and failures, yet nothing can *utterly* fail whose basic principle is "Love to God and good fellowship with each other." With this for a foundation, and the certainty that nothing will so effectually hasten the coming of the Kingdom of Heaven upon earth as the abolition of intemperance, I can cheerfully give what is left of life to this glorious cause, feeling that it is better to *fail* than never to have *striven*.

Our no-license experience in Cambridge, the past three years, has taught us the power and strength of united effort; the rich and the poor, the high and the low, have joined hands, and, thank God, we can again proclaim our city free from the saloon and its evils. Not all the avenues of sin have been closed, but we can take courage and hope for better times yet.

All of which is respectfully submitted,

ALONZO STEWART,

Missionary of Sanders Temperance Fund.

REPORT

OF THE

OVERSEERS OF THE POOR.

Office of the Overseers of the Poor,
Central Square Building,
Cambridgeport, Dec. 26, 1889.

To the Honorable, the City Council of the City of Cambridge: —

Gentlemen: Another financial year has closed, and, under the Act of 1877, it becomes the duty of the Overseers of the Poor to render a report of the department placed in their charge.

In April last, by the unanimous vote of the City Council, Sumner Albee was re-elected as a member of the Board for a period of five years.

OUTSIDE AID.

Under the system inaugurated by the Board, and pursued during the past twelve years, the histories of 512 new applicants for relief have been taken during the past year, embracing 1,536 persons (640 males, 896 females), 508 of whom were adults, and 1,028 minors.

Of these applicants, 197 have a legal claim upon this city; 122 are settled in other cities and towns; and 250 have no settlement. There have been 57 histories revised, to accord with the changes made in the pauper laws. There are now 6,154 histories on file, covering 18,462 persons. The Visitor has made 2,428 visits to homes of the poor and elsewhere, and portions of 296 days have been passed by him in examining the

tax records of Cambridge and other cities and towns. 437 families have been aided from the office during the past year, embracing 1,529 persons.

The cost of making these investigations and collecting the histories of applicants for aid in our city, together with the sometimes heavy expense of visiting the poor in other cities and towns chargeable to Cambridge; the clerical work of the office in arranging and classifying these valuable histories and records for quick and easy reference; the making out of the accounts, bills, and correspondence relating to the poor, has all been, and is now, borne by the department of Outside Aid, and forms no small portion of its expenditures.

The office of the Secretary, David P. Muzzey, is filled with valuable books and records, carefully kept, rendering it one of the best equipped in the State. Here may be found a complete file of the Cambridge Directory, from 1847 to the present date; also, directories of Boston since 1848; and a complete file of the Somerville directories since 1869. There is, also, an unbroken set of bound volumes of our own city documents since its organization in 1846, besides a complete file of the reports of the State Board of Lunacy and Charity since 1865, and the entire body of statutes passed by our Legislature. A careful method of preserving all correspondence, notices, denials, etc., has been adopted, as well as a minute record made of all bills paid, and financial accounts determined. Every facility in the way of improvements has thus been incorporated in the system of dispensing relief, and frequent meetings of the Committee of Investigation have been held.

The medical branch of the department has proved a very important adjunct, not only in the beneficial results to our own poor, but also gratifying in the secured revenue to the city treasury, for the care of the sick poor belonging to other cities and towns, and to the State.

Dr. Lewis L. Bryant, the Assistant City Physician, in his report appended hereto, states that he has attended 774 persons, an increase of 15 per cent. over the previous year, and 94 per cent. since the year ending Nov. 30, 1882.

Eighteen hundred and seventy-five visits have been made to 620 different patients outside of the Almshouse; 76 persons

have been examined relative to insanity, of whom 60 have been committed to the State lunatic hospitals.

Twenty women have been attended in childbirth, and 16 living children have been born.

Forty-six certificates of death of persons dying without medical attendance have heen rendered to the City Clerk. 30 persons, aided by the city, have died during the year, outside of the Almshouse.

In connection with this report, the Board would allude to the importance of added provision for the wants of the sick poor outside of the Almshouse, and we recommend the employment of a female nurse, whose duty it shall be to attend the sick, prepare their diet; see that the medicine prescribed is taken by the patient; obtain from the office orders for requisite supplies of food and nourishment, and thus exercise a general supervision of the sick under the immediate direction of the Assistant City Physician.

The number of paupers supported by the city, at various institutions, within the past year, was as follows: —

City Almshouse	304
State Lunatic Hospitals	119
Middlesex House of Correction	7
Massachusetts School for Feeble Minded	3
	433

The expenditures for outside aid have been $32,386.15. Of this amount, $15,062.30 has been expended for the 119 insane at the State lunatic hospitals. This number includes 19 at the Danvers Hospital, 60 at the Worcester Lunatic Hospital, 16 at the Worcester Insane Asylum, 2 at the Taunton Lunatic Hospital, 17 at the Westborough Insane Hospital, 3 in the insane ward of the State Almshouse at Tewksbury, 1 in the insane ward of the State Farm at Bridgewater, 1 at the Northampton Lunatic Hospital. There have been 27 new admissions the present year.

By caring for the 22 cases of the mildly insane class at the Almshouse, the above expenses have been considerably reduced. Several patients were transferred from the State lunatic hospitals during the past year.

The receipts for outside aid have been $3,839.12, leaving a

net cost of $28,547.03 for the support of the poor outside of the Almshouse. Of the receipts, $1,365.87 has been refunded by the relatives of insane persons supported by the city, $1,354.36 has been reimbursed to our treasury from other cities and towns, and $1,118.89 from the State Treasurer.

It will be noticed that there is a considerable increase in the expenditures for outside aid which deserves some explanation.

In accordance with a new plan, a supply of coal required for the whole of next year was purchased by the Fuel Committee of the City Council, and paid for from the present year's appropriation. This required the building of a new coal-shed, on Norfolk Street, which expense, also, has been paid this year. There have been more cases of sick poor at the Carney Hospital, the Cambridge Hospital, and the Children's Hospital, causing an increased expenditure of more than $1,000. There has been a greater cost for prisoners in the House of Correction, at East Cambridge, within the year. The law requiring children, above the age of four years, to be boarded out at the expense of the city, has proved an important additional expenditure, the average cost being about three dollars a week each for the 12 children boarded out by the Overseers of the Poor. It has been found necessary to provide more clerical assistance at the office, to bring up the back records, as well as to carry on the increased present requirements of caring for the outside poor.

ALMSHOUSE.

The Overseers of the Poor are glad to report that the Almshouse has been carried on very ably and efficiently by the Superintendent and Matron, Martin L. Eldridge and wife, and their faithful assistants. We see no cause for complaint in any of the departments of the institution, and all the inmates are carefully and kindly cared for.

Total number of inmates during the year	304
Total number present, Nov. 30, 1889	141
Average monthly number	139

As will be seen by the report of the Superintendent hereunto attached, 169 inmates have been admitted during the year, 150

entered on permits of the Secretary of the Board, and 19 were sentenced by the court. Five have been committed as neglected children. Fourteen boys have been sentenced to the Almshouse Truant School during the year, — most of them for a period of two years, — by the District Court of Cambridge.

Of the 304 inmates present within the year, 209 were adults and 95 were minors. There have been 163 discharged, of whom 99 were males and 64 were females.

Included in the total number of inmates present, Nov. 30, 1889, are 22 of the mildly insane class, 5 of whom are males and 17 females.

From the report of the Assistant City Physician, it will be seen that he has visited the Almshouse 165 times, and made 1,182 professional calls on 119 sick persons therein, 67 of whom were males and 48 females. There were 9 patients in the hospital wards on Nov. 30, 1889.

The employment of boys in seating cane chairs has been continued with good results, and it might be wise, perhaps, to extend the system of labor in other directions as well.

Miss Alice Fawcett has continued in charge of the Almshouse school another year, and satisfactory progress has been made. There has been an attendance of 60 scholars during the year, and 37 were present Nov. 30, 1889.

Rev. F. W. Holland has acted as Chaplain of the institution during the year.

The usual schedule of personal property, as given by the Superintendent, exhibits a valuation of $15,183.40.

The expenditures of the Almshouse for the year have been $21,829.03, and the receipts have been $909.04, leaving a net cost of $20,919.99, an increase of $2,367.45 over the previous year.

FARM AND LEDGE.

Under the intelligent care of the farmer, James Welch, a great increase has been attained in the products, and a consequent advance in the revenue.

Three paid employés have worked on the city ledge, and ready purchasers have bought the entire supply of stone.

There have been several able-bodied men sent to the ledge by the Secretary, who have received, in return for their labor, supplies of groceries, fuel, and shoes.

The expenditures for the farm and ledge have been $4,661.30, and the revenue has been $9,238.21, leaving an excess of $4,576.91, an increase of $1,270.60 over the previous year.

HOUSE OFFAL.

In 1866 an order was passed by the City Council, — but in force only that year, — asking the Overseers to take charge of the collection of house offal, and dispose thereof by sale. The Board has continued, until the present time, their voluntary charge of this department, although it has no connection whatever with the care of the poor.

The expenditures have been $18,145.20, and the receipts have been $7,324.61, leaving a net cost of $10,820.59, a small decrease from the previous year.

The appropriation, as made by the City Council, for the financial year, was as follows: —

Pauper Department, Outside Aid	$26,000 00
" " Almshouse	18,000 00
" " House Offal	12,000 00
	$56,000 00

The estimated revenue was, —

Pauper Department, Outside Aid	$4,000 00
" " Almshouse	8,000 00
" " House Offal	6,500 00
	$18,500 00

RECAPITULATION.

Total expenditures, Outside Aid	$32,386 15
Total receipts	3,839 12
Net cost	$28,547 03
Total expenditures, Almshouse, farm, and ledge	$26,490 33
Total receipts	10,147 25
Net cost	$16,343 08

Total expenditures, exclusive of house offal . .	$58,876 48
Total receipts	13,986 37
Net cost of care of the Poor	$44,890 11

Respectfully submitted,

HENRY H. GILMORE,
STEPHEN ANDERSON,
SUMNER ALBEE,
CHARLES WALKER,
C. E. VAUGHAN,
MICHAEL CORCORAN,
} *Overseers of the Poor.*

TABLE OF EXPENDITURES.

BILLS APPROVED BY THE OVERSEERS OF THE POOR, DECEMBER, 1888, TO DECEMBER, 1889.

Months.	Outside Aid.	Almshouse.	Farm and Ledge.	House Offal.	Total.
1888.					
December..	$1,334 01	$1,847 60	$424 38	$1,340 80	$4,946 79
1889.					
January ...	6,792 37	2,087 40	491 37	1,601 60	10,972 74
February...	1,564 13	1,686 95	592 23	1,357 47	5,200 78
March	1,167 65	1,679 66	526 82	1,533 08	4,907 21
April	4,703 17	1,810 05	270 07	1,209 38	7,992 67
May	1,179 20	1,767 91	323 26	1,730 13	5,000 50
June	565 25	1,432 85	365 46	2,102 01	4,465 57
July.....	6,336 33	3,071 96	280 11	1,382 00	11,070 40
August.....	1,038 99	1,273 25	338 75	1,442 51	4,093 50
September .	2,087 87	1,437 71	483 87	1,586 92	5,596 37
October....	4,384 98	1,607 26	220 50	1,232 98	7,445 72
November..	1,232 20	2,126 43	344 48	1,626 32	5,329 43
Total....	$32,386 15	$21,829 03	$4,661 30	$18,145 20	$77,021 68

TABLE OF RECEIPTS.

From December 1, 1888, to December 1, 1889.

Months.	Outside Aid.	Almshouse.	Farm and Ledge.	House Offal.	Total.
1888.					
December.....	$106 64	$37 93	$677 71	$610 40	$1,432 68
1889.					
January.....	278 48	64 29	612 89	688 40	1,644 06
February.....	227 86	111 77	973 04	634 47	1,947 14
March.....	210 90	59 89	298 58	620 60	1,189 97
April	361 74	78 59	536 08	532 04	1,508 45
May	214 11	53 24	310 13	604 77	1,182 25
June.....	773 78	28 02	1,150 60	458 37	2,410 77
July	362 53	32 57	802 93	461 41	1,659 44
August.....	49 50	28 88	1,255 18	560 36	1,893 92
September....	39 41	73 67	987 04	522 70	1,622 82
October.....	1,099 14	90 19	538 43	684 31	2,412 07
November	115 03	250 00	1,095 60	946 78	2,407 41
Total.....	$3,839 12	$909 04	$9,238 21	$7,324 61	$21,310 98

OUTSIDE AID DEPARTMENT, DEC. 1, 1888, TO DEC. 1, 1889.

Monthly Accounts.	Salaries, Books and Stationery.	Postage and Printing.	Medical Attendance and Appliances.	Undertaker and Cemetery.	Fuel and Coal Shed.	Groceries.	Boots, Shoes, Clothing, Dry Goods.	Transportation and Travel.	Outside Support.	Criminal Paupers.	State Lunatic Hospital.	Ice and Repairs.	Telephone.	Gas.	Miscellaneous.	Total.
1888.																
December..	$248 84	$4 48	$57 90	$4 00	$321 40	$311 61		$118 52	$245 96			$21 05			$ 25	$1,334 01
1889.																
January...	230 65	4 98	23 45	20 00	345 16	349 88	$100 04	20 58	1,258 95	$106 29	$4,223 39	48 50	$26 90	$33 05	55	6,792 37
February...	224 90	9 48	14 21	10 00	300 23	290 00	21 83	6 84	685 89						75	1,564 13
March.....	288 55	4 75	8 00	4 00	299 83	332 66		27 71	201 90						25	1,167 65
April.....	247 40	4 48	9 40	2 00	137 22	59 92	42 13	22 99	577 25		3,537 74	1 25	26 40	33 49	1 50	4,703 17
May.....	239 24	83 19	71 27	103 00	44 55	252 44	5 01	8 52	349 24		15 00	6 49			1 25	1,179 20
June.....	278 00	8 73	33 30	10 00		24 62	3 73	23 16	183 11						60	565 25
July.....	268 25	28 48	62 62	4 00	724 01	228 27	6 52	66 16	1,313 59		3,585 99		26 90	21 29	25	6,336 33
August.....	323 25	2 24	21 00	6 00	303 11	64 25	3 75	2 00	312 26			1 00			13	1,038 99
September.	262 90	22 98	20 93	65 00	1,211 10	231 08	4 82	25 62	231 26			11 44			74	2,087 87
October	259 40	4 73	29 00	4 00		67 50	43 01	17 98	344 86		3,573 55	14 00	26 70		25	4,384 98
November..	334 65	4 73	10 00	8 00	175 61	53 50	16 00	35 56	465 07		126 63	2 00			45	1,232 20
Total.....	$3,206 03	$183 25	$361 08	$240 00	$3,862 22	$2,265 73	$246 84	$375 64	$6,149 34	$106 29	$15,062 30	$105 73	$106 90	$87 83	$6 97	$32,386 15

ALMSHOUSE DEPARTMENT, DEC. 1, 1888, TO DEC. 1, 1889.

Monthly Accounts.	Salaries and Wages.	Medicines, Attendance and Appliances.	Groceries and Provisions.	Dry Goods, Clothing, Boots and Shoes.	Fuel.	Gas.	Hardware and Repairs.	Lumber.	Grain and Hay.	Manure, Plants, Flower Pots.	Household Wares.	Stationery, Postage and Printing.	Telephone, Transportation.	Burials and Cemetery.	Furniture, Sewing Machine.	Miscellaneous.	Total.
1888. December...	$457 07	$31 57	$859 37	$119 32	$167 31		$93 30		$42 00		$48 83	$2 00	$4 03			$4 80	$1,847 50
1889. January ...	430 20	30 04	676 02	391 63	115 44	$103 13	76 07	$50 44	73 40		82 16	18 05	31 62			9 20	2,087 40
February...	450 83		660 39	247 65	229 02		10 79	3 15	21 86	$2 00	38 66	3 50	3 45	$4 00		11 65	1,686 95
March	595 55		694 60	125 31	86 04		105 84		50 68	3 34	6 00	2 00	1 85	2 00		6 45	1,679 66
April	458 10		528 71	116 12	144 40	106 43	136 95	94 17	51 65		32 30	14 50	19 91	2 00	$96 21	9 60	1,810 05
May	442 11	65 12	792 25	151 17	56 29		106 01		38 19		15 44	22 33	1 45	70 00		7 55	1,767 91
June.....	663 94		379 17	141 70	63 93		38 72		17 27		98 62	5 50	1 85		12 50	9 65	1,432 85
July	579 20	1 46	711 20	91 20	1,306 54	39 60	167 55	82 02	16 85		13 84	5 15	39 25			18 10	3,071 96
August.....	523 52		390 01	178 87	40 28		14 62				59 98		10 80		40 00	15 17	1,273 25
September..	612 50	62 83	428 29	126 42	43 89		53 88	1 40	36 23		8 52	15 50	5 60		12 50	9 15	1,437 71
October....	494 70		629 71	202 40	29 14	38 78	127 41	20 35	25 20		12 01	4 53	15 55	21 00		7 45	1,607 26
November..	567 67	44 30	903 27	354 80			77 78	15 45	17 98		110 39	15 96	5 30			14 25	2,126 43
Total	$6,293 39	$235 32	$7,652 99	$2,244 87	$2,282 28	$287 94	$1,008 92	$266 98	$391 31	$5 34	$526 78	$109 02	$140 66	$99 00	$161 21	$123 02	$21,829 63

FARM AND LEDGE DEPARTMENT.

DEC. 1, 1888, TO DEC. 1, 1889.

Monthly Accounts. 1889.	Labor on Farm.	Labor on Ledge.	Blacksmith.	Powder.	Transportation and Hardware.	Garden Seeds and Hot-bed Sashes.	Cows, Pigs and Horse.	Hay, Manure and Stone.	Market Stand.	Miscellaneous.	Total.
1888. December..	$50 00	$318 45		$17 03	$29 11			$9 79			$424 38
1889. January. ..	54 00	175 20	$26 70	18 25				217 22			491 37
February ..	54 00	175 20		18 25	15 79	$95 00	$60 50	171 49		$2 00	592 23
March	67 50	219 00	38 55			110 57	90 00			1 20	526 82
April.....	54 00	156 30		34 75	4 16			20 86			270 07
May	54 00	156 25		18 25		2 50	37 00	55 26			323 26
June.....	67 50	187 50	21 25	18 25	17 95	9 73		38 78		4 50	365 45
July	54 00	150 00		16 50	5 25	23 60		30 76			280 11
August....	67 50	187 50		18 25	5 50	20 00			$40 00		338 75
September.	114 00	150 00	15 50	19 96			150 00	34 41			483 87
October ...	54 00	150 00		16 50							220 50
November.	127 50	187 50		17 03		12 45					344 48
.....											
Total	$818 00	$2,212 90	$100 02	$213 02	$77 76	$273 85	$337 50	$578 57	$40 00	$7 70	$4,661 30

HOUSE OFFAL DEPARTMENT.

DEC. 1, 1888, TO DEC. 1, 1889.

Monthly Accounts. 1889.	Wages.	Blacksmith.	Grain.	Hay and Straw.	Hardware.	Veterinary.	Repairs and Clothing.	Horse and Wagon.	Lumber and Wooden Ware.	Total.
1888. December ...	$1,100 00	$47 67	$4 45	$171 18	$8 50				$9 00	$1,340 80
1889. January.....	1,068 00	87 63	328 30		33 58		$84 09			1,601 60
February....	1,068 00		25 85	263 62						1,357 47
March.....	1,335 00	151 86	22 30		11 77		12 15			1,533 08
April	1,104 00		25 60	79 78						1,209 38
May	1,116 00		59 94				88 00	$260 00	206 19	1,730 13
June.....	1,395 00	61 97	268 90	214 39			11 00	150 75		2,102 01
July	1,116 00	67 15	34 15		4 50	$29 00	131 20			1,382 00
August	1,395 00		21 00			6 00			20 51	1,442 51
September ..	1,116 00	157 52	234 98	78 42						1,586 92
October.....	1,116 00	86 72	27 10		3 16					1,232 98
November...	1,403 00	12 25	189 07				22 00			1,626 32
Total.....	$14,332 00	$672 77	$1,241 64	$807 39	$61 51	$35 00	$384 44	$410 75	$235 70	$18,145 20

VISITOR'S REPORT FOR 1889.

VESPASIAN DANFORTH.

Months.	Histories Written.	Settled in Cambridge	Settled Elsewhere.	Unsettled.	Visits.	Tax Examinations.
1888.						
December.	71	21	17	33	252	25
1889.						
January...	63	22	21	20	215	27
February..	48	11	13	24	188	22
March	55	18	11	26	214	26
April.....	32	12	11	9	170	24
May.....	33	13	6	14	218	26
June	34	15	6	13	178	20
July	38	14	5	19	196	23
August...	31	9	5	17	167	26
September.	60	22	11	27	221	25
October...	50	20	8	22	190	27
November.	54	20	8	26	219	25
Total...	569	197	122	250	2,428	296

Respectfully submitted,

VESPASIAN DANFORTH,

Visitor.

REPORT

OF THE

SUPERINTENDENT OF THE ALMSHOUSE

MARTIN L. ELDRIDGE.

CAMBRIDGE, Dec. 1, 1889.

To the Overseers of the Poor: —

GENTLEMEN: I herewith respectfully submit the annual report of the Almshouse for the year ending Nov. 30, 1889.

The whole number of persons in the Almshouse during the year was as follows: —

Males	184
Females	120
Total	304
Adults	209
Minors	95
Whole number in the Almshouse Nov. 30, 1889	141
Average number during the year	139

The following tables will show the admissions, discharges, and deaths for the year: —

TABLE I.

SHOWING THE NUMBER AND SEX OF ADULT PERSONS AND MINORS OF ALL CLASSES RECEIVED INTO THE ALMSHOUSE IN EACH MONTH OF THE YEAR ENDING NOV. 30, 1889.

Months.	Adults.		Minors.		Total.	Neglected Children.		Pauper Children.		Truant Children.	
1888	*M.*	*F.*	*M.*	*F.*		*M.*	*F.*	*M.*	*F.*	*M.*	*F.*
December.....	4	4	1	0	9	0	0	0	0	1	0
1889											
January	7	4	3	0	14	0	0	3	0	0	0
February	8	1	1	2	12	0	0	0	2	1	0
March.....	5	5	1	2	13	0	0	1	2	0	0
April.....	3	4	4	1	12	0	0	2	1	2	0
May.....	5	3	3	2	13	0	0	2	2	1	0
June	5	6	3	0	14	0	0	1	0	2	0
July.....	7	2	5	3	17	2	1	3	2	0	0
August.....	5	6	3	0	14	0	0	3	0	0	0
September	5	4	5	3	17	0	2	5	1	0	0
October	5	5	7	3	20	0	0	2	3	5	0
November.....	8	3	3	0	14	0	0	1	0	2	0
Totals.....	67	47	39	16	169	2	3	23	13	14	0

TABLE II.

SHOWING THE NUMBER AND SEX OF ADULT PERSONS AND MINORS OF ALL CLASSES DISCHARGED FROM THE ALMSHOUSE IN EACH MONTH OF THE YEAR ENDING NOV. 30, 1889.

Months.	Adults.		Minors.		Total.	Neglected Children.		Pauper Children.		Truant Children.	
1888.	*M.*	*F.*	*M.*	*F.*		*M.*	*F.*	*M.*	*F.*	*M.*	*F.*
December.....	1	4	2	0	7	0	0	0	0	2	0
1889.											
January.....	4	4	3	1	12	0	0	2	1	1	0
February.....	5	3	0	1	9	0	0	0	1	0	0
March.....	10	4	2	3	19	1	0	1	3	0	0
April.....	10	4	3	0	17	0	0	2	0	1	0
May	2	3	2	0	7	1	0	0	0	1	0
June.....	6	8	3	2	14	0	0	3	2	0	0
July	10	5	4	0	19	0	0	2	0	2	0
August.....	4	7	2	2	15	0	2	2	0	0	0
September	6	5	2	2	15	0	0	1	2	1	0
October	2	1	4	4	11	0	1	3	3	1	0
November.....	5	5	7	1	18	0	0	5	1	2	0
Totals.....	65	48	34	16	163	2	3	21	13	11	0

TABLE III.

Showing the Name, Age, Time of Admission, Date and Cause of Death of Each Person who Died in the Almshouse During the Year Ending Nov. 30, 1889.

Names.	Age.	Date of Admission.	Date of Death.	Cause of Death.
——— Tracey			Jan. 20, 1889.	Stillborn.
Charles Miller	29	Jan. 14, 1889.	Jan. 22, 1889.	Consumption.
Margaret Gaffey	67	Jan. 26, 1889.	Feb. 5, 1889.	Atrophy and Debility.
Julia Conners	59	Dec. 14, 1888.	Feb. 19, 1889.	Atrophy and Debility.
Ulrika E. Lindskom	30	Aug. 29, 1887.	Feb. 27, 1889.	Cephalitis.
Ann Gilner	70	April 9, 1889.	April 11, 1889.	Pneumonia.
Thomas Sullivan	62	May 20, 1889.	June 24, 1889.	Tumor.
Benjamin Bryant	63	Dec. 5, 1887.	Aug. 25, 1889.	Cholera Morbus.
Bridget Landy	67	May 20, 1889.	Aug. 28, 1889.	Apoplexy.
Elizabeth Weltch	87	Aug. 8, 1889.	Sept. 3, 1889.	Apoplexy.
William L. Kennard	79	June 23, 1881.	Sept. 11, 1889.	Old Age.
Mary Avery	66	April 14, 1883.	Sept. 21, 1889.	Gangrene.
Sarah Stones	85	Oct. 6. 1885.	Nov. 18, 1889.	Dementia Paralytica.

PRODUCTS OF THE FARM.

8 barrels of apples	$16 00
300 bushels beans	300 00
400 bushels beets	240 00
100 bushels beet-greens	20 00
14,000 cabbages	400 00
Cabbage plants, sage and parsley	10 00
220 boxes celery	810 00
Celery Plants	56 00
10,000 cucumbers	300 00
60 bushels carrots	38 00
130 bushels dandelion greens	120 00
5 bushels grapes	5 00
12 tons hay and straw	220 00
250 dozen hot-bed lettuce	100 00
400 dozen out-door lettuce	60 00
4 ton mangold-wurzels	70 00
200 bushels onions	120 00
300 bushels parsnips	220 00
3 barrels pears	3 00
150 bushels peas	175 00
6,823 pounds pork	473 87
120 bushels potatoes	120 00
100 bushels spinach	25 00
6 tons squash	90 00
620 bushels tomatoes	310 00
	$4,301 87

Whole number of children attending school Nov. 30, 1889:

Boys	30
Girls	7
Total	37
Total during the year	60

Included in the whole number of the Almshouse Nov. 30, 1889, there are:

INSANE OR DEMENTED.

Males	5
Females	17
Total	22

IDIOTIC OR IMBECILE.

Males	1
Females	1
Total	2

EPILEPTICS.

Males	2
Females	1
Total	3

Included in the whole number discharged during the year are the following:

To Insane Asylum, Worcester	8
Carney Hospital, Boston	6
Children's Hospital, Boston	1
State Almshouse, Tewksbury	3

Remaining in the Almshouse, Nov. 30, 1889:

Males	85
Females	56
Total	141
Adults	96
Minors — Boys 35, girls 10	45

Of the boys there are:

Boarders	2
Neglected children	4
Pauper children	9
Truant children	20
Total	35

Of the girls there are:

Neglected children	5
Pauper children	5
Total	10

HOSPITAL ACCOMMODATIONS.

Of the one hundred and sixty-nine persons received during the year, fifty-five were minors, sixteen were insane persons, and seventy-one were hospital patients; or, in other words, more than seventy per cent. of the adult sane persons received were subjects for hospital treatment.

When it is remembered that our almshouse was constructed forty years ago, and that it was designed more to give proper accommodations to able-bodied State paupers, and persons received upon sentences to the work-house, than for the class of sick people now sent to us, it need not appear strange that we find the space devoted to hospital purposes entirely insufficient.

While this matter of increased accommodations for the proper care of the sick is an urgent need, and should not be long delayed, yet a wise economy will doubtless suggest that possible changes in the classification of our inmates should be carefully examined, and that extensive alterations in our buildings should only be made when the city has adopted some settled and comprehensive policy in regard to her numerous and varied dependents.

A NURSERY COTTAGE.

We have received during the year twenty children under four years of age.

These children have received a nourishing diet, and their physical condition is all that could be desired, but the moral atmosphere they breathe could hardly be worse. By night and by day they mingle with aged, morose, and peevish women, saddened by the misfortunes of a life-time.

There is no other place for them.

They are dependents whom the city must care for.

Why not give these children, and such as may come after them, a fair chance for a healthy mental and moral growth by erecting, at a moderate expense, near the Almshouse, but separate from its companionship, a cosy nursery cottage where these children, under the care of a kind-hearted motherly

woman, may learn the sweet lessons of childhood — of trust and faith and purity.

There is no wiser economy than a liberal outlay which prevents pauperism and crime by the proper care and training of the young, while there is no more wasteful extravagance than a niggard parsimony which cannot afford to remove childhood beyond the reach of evil and debasing influences.

GENERAL REMARKS.

Our truant school has been faithfully conducted, and exhibits good results in the steady improvement of our children.

The officers of the institution, and all connected with the industries carried on by the establishment, have shown a gratifying fidelity in the performance of their work.

Our work is obscure and unattractive, yet in some of its features it is the tenderest and noblest work committed to human hands. To be a friend to the friendless; to assuage the pangs of human suffering; to cheer the despondent; to guide the foot-steps of youth to paths of safety; to stand beside the dying bed of one deserted by kith and kin; to speak a word of comfort and consolation to "him who thought to die alone" — such duties and such occasions are among the best opportunities of human usefulness. Respectfully submitted,

MARTIN L. ELDRIDGE,

Superintendent.

REPORT

OF THE

ASSISTANT CITY PHYSICIAN.

LEWIS L. BRYANT.

CAMBRIDGEPORT, Dec. 1, 1889.

To the Overseers of the Poor: —

GENTLEMEN: I have the honor to present the following report of the doings of this office for the year ending Nov. 30, 1889.

Seven hundred and seventy-four persons have received professional attendance, the same being an increase of nearly 94 per cent. since the year ending Nov. 30, 1882, and of nearly 15 per cent. since the year ending Nov. 30, 1888.

The Almshouse has been visited one hundred and sixty-five times, and 1,182 professional visits were made to 119 sick persons therein. Of these 49 were men, 41 were women, 18 were boys and 7 were girls. There remain 9 patients, 3 males and 6 females, in the hospital wards.

Outside of the Almshouse eighteen hundred and seventy-five visits were made to 620 different persons, of whom 160 were men, 250 were women, 104 were boys and 106 were girls.

Thirty-five persons were examined for the police force under the Civil Service Law.

Seventy-six persons — of whom 40 were males and 36 were females — were examined relative to their sanity, and 60 of these, including 28 males and 32 females, were deemed proper subjects for treatment in the State insane asylums, and with due process of law were sent thereto. Five chronic and incurable cases, returned to the city to find a home at the Almshouse, were recommitted to the asylums for the care their better facilities afforded.

Thirty persons have been attended at the police stations.

Twenty women were attended in childbirth, and 16 living children were born.

Forty-six certificates of death, of persons dying without medical attendance, have been made out after proper investigation.

There have occurred 43 deaths, including 13 at the Almshouse, in this practice, a tabular view of which will be found on the last page of this report.

Medicines and surgical appliances to the amount of $251.58 have been purchased for the use of those outside, and $225.32 for those in the Almshouse. Total amount expended $476.90.

Gentlemen: Last February I sent to you a communication advocating the employment of a visiting nurse, whose duty it should be to follow your medical officer in his visits to the sick, and add her efforts to his in the endeavor to ameliorate their condition and teach them self-dependence.

After mature consideration the matter was postponed till later in the season, on account of want of available funds. The subject was then brought to the attention of the Associated Charities, who were very favorably disposed toward it, but unable to take any active measures, partly, because as an organization they have no money available for such a purpose, and partly because the majority of those consulted thought that the said nurse should be an employé of your board.

The Rev. Mr. Tunis, of the Austin-Street Unitarian Church, then became especially interested in the project, brought it before his parish committee, and secured, by private subscription, sufficient funds to pay for the services and travelling expenses of a nurse for two months.

A trained nurse was employed, and during the two months closing Nov. 30th she has satisfied those under whose direction she labored that the scheme is practical, the need real, and the results full of encouragement for the future, and of inestimable benefit to those whom we are all trying to keep from and raise up out of pauperism.

But the feeling grew that no single church should take upon itself the burden of nursing the city's poor; that she should be employed and paid by the city, in whose interests and for

whose unfortunates she labored; that so long as a church consented to do public work just so long the public would refrain from recognizing her office as one deserving encouragement and financial support; and, consequently, no direct appeal was deemed advisable, or made, to the church for funds to pay for her continued services, and she has ceased her efforts. I trust that immediate steps will be taken by you to provide some one who shall continue the work so well begun.

I also wish to call your attention to the growing need of better hospital facilities for the care of the sick at our Almshouse. All who go there are incapacitated for labor by reason of age or illness, and for a time require hospital treatment. The hospital wards consist of a large room at either extremity of the wings of the building. That for the women is in the north wing, and is up two flights of stairs, between the female insane ward above and the nursery below. It is 28 x 28 x 11 feet, contains eight beds, and has two small rooms opening from it, each 15 x 12 x 11 feet, one of which is used as a lying-in room.

The wail of the infants mingled with the tramp of the insane are often annoying to those in the hospital, banishing sleep, and retarding recovery. The food for the patients must be carried up two flights of stairs, and the remnants, after a meal, must be carried down the same.

The male ward is at the extremity of the other wing, is 15 x 23 x 11 feet, and contains six beds. It is on the second floor, and connects with what is known as the "old men's room" and a small room 12 x 12 x 11 feet, containing two beds, one of which is occupied by the hospital attendant.

These two wards are far from being convenient to work in; will bear no more crowding; have no ventilation, save such as can be obtained by opening the doors or windows, and the patients are not sufficiently secluded, and yet are too far from the source of supplies.

In the event of the establishment of a county truant-school, the quarters now occupied by the boys might be remodelled and fitted up as hospital wards. But, taking into consideration the many known and constantly increasing wants of this institution, all the room in that illy contrived structure will

be called into requisition for purposes for which it is better adapted.

What I would strongly recommend is, that a change be at once made which shall give us ample hospital facilities for many years, viz., that a covered-way be built to the new brick building now used for a smoking-room and a school-room, and that both be converted into hospital wards, one for the men, and the other for the women. That each be divided into small rooms, of not less than eight hundred cubic feet each, with a central corridor, and each room warmed and ventilated by the most approved systems.

The State Almshouse is kept abreast of the most humane thought and treatment of the times. Cambridge cannot do less than to emulate its example, if though, necessarily, on a smaller scale.

TABLE OF DEATHS.

Almshouse.	December. 1888.	January 1889.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	Males.	Females.	Total.
Apoplexy	–	–	–	–	–	–	–	–	1	1	–	–	–	2	2
Atrophy and Debility	–	–	2	–	–	–	–	–	–	–	–	–	–	2	2
Cephalitis	–	–	1	–	–	–	–	–	–	–	–	–	–	1	1
Cholera Morbus	–	–	–	–	–	–	–	–	1	–	–	–	1	–	1
Consumption	–	1	–	–	–	–	–	–	–	–	–	–	–	1	1
Dementia Paralytica	–	–	–	–	–	–	–	–	–	–	–	1	–	1	1
Gangrene	–	–	–	–	–	–	–	–	–	1	–	–	–	1	1
Old Age	–	–	–	–	–	–	–	–	–	1	–	–	1	–	1
Pneumonia	–	–	–	–	1	–	–	–	–	–	–	–	–	1	1
Stillborn	–	1	–	–	–	–	–	–	–	–	–	–	–	1	1
Tumor	–	–	–	–	–	–	1	–	–	–	–	–	1	–	1
Outside.	–	2	3	–	1	–	1	–	2	3	–	1	3	10	13
Bronchitis	1	–	–	–	–	–	–	–	–	–	–	–	–	1	1
Cancer	–	–	–	1	–	–	–	–	2	–	–	–	3	–	3
Cephalitis	–	–	–	–	–	–	–	–	–	–	1	–	1	–	1
Cerebral Disease, Obscure	–	–	–	–	–	–	–	–	–	–	1	–	1		1
Cholera Morbus	–	–	–	–	–	–	–	1	–	–	–	–	1	–	1
Cholera Infantum	–	–	–	–	–	–	–	1	–	–	–	–	1	–	1
Colo-enteritis	–	–	–	–	–	–	–	1	–	–	–	–	1	–	1
Coma-Uremic	–	–	–	–	–	–	–	–	–	–	–	1	–	1	1
Consumption	2	1	1	–	1	–	–	2	–	1	1	–	6	3	9
Convulsions	–	1	–	–	–	–	–	–	–	–	–	–	–	1	1
Diphtheria	–	–	–	–	1	–	1	–	1	–	1	–	1	3	4
Nephritis, Chronic	–	–	–	–	–	–	–	–	–	–	–	1	1	–	1
Old Age	–	–	–	–	–	–	–	–	–	1	–	–	1	–	1
Pneumonia	–	–	–	–	–	1	–	–	–	–	–	–	1	–	1
Stillborn	–	–	–	–	–	–	1	–	–	–	–	–	–	1	1
Stricture of Œsophagus	–	1	–	–	–	–	–	–	–	–	–	–	–	1	1
Unknown	–	–	–	1	–	–	–	–	–	–	–	–	1	–	1
	3	3	1	2	2	1	2	5	3	2	4	2	19	11	30
Total	3	5	4	2	3	1	3	5	5	5	4	3	22	21	43

Very respectfully submitted,

LEWIS L. BRYANT, M. D.

CAMBRIDGEPORT, Dec. 1, 1889. *Ass't City Physician.*

CITY CLERK'S ACCOUNT OF FEES AND LICENSES.

CAMBRIDGE, NOV. 30, 1889.

To the Honorable the City Council: —

THE undersigned herewith presents an account of the sums received for Fees and Licenses during the year ending this day.

Auctioneers' Licenses	$48 00
Pool and Billiard Table Licenses	62 00
Wagons and Carriages	171 00
Intelligence Offices	20 00
Junk Licenses (Stores and Collectors)	334 00
Pawnbrokers	6 00
Recording Mortgages, Assignments, etc.	454 51
Marriage Certificates	375 00
Certified Copies from the Records	5 25
Dog Licenses	424 20
Liquor Licenses	40 00
Fireworks	81 00
Minors' Licenses, for the sale of newspapers, etc.	122 15
Sundries	4 05
	$2,147 16

All of which has been paid into the City Treasury.

The receipts from Dog Licenses have been as follows: —

1,878 Males, at $2 each	$3,756 00
243 Females, at $5 each	1,215 00
Total, 2,121	$4,971 00

Of this amount, the Clerk's fee (20 cents for each license issued), amounting to $424.20, has been paid to the City Treasurer, and the balance, amounting to $4,546.80, has been paid to the County Treasurer.

Respectfully submitted,

WALTER W. PIKE,
City Clerk.

CITY TREASURER'S FEES

FOR THE YEAR ENDING NOV. 30, 1888.

CITY OF CAMBRIDGE,
OFFICE OF CITY TREASURER, Dec. 1, 1889.

To the Honorable the City Council: —

I HAVE the honor to report, that I received, during the year ending Nov. 30, 1889, fees to the amount of *twelve hundred sixty and $\frac{48}{100}$ dollars*, in items as follows, viz.: —

From summonses issued	$672 22
From poundage on poll and personal taxes	67 81
From refund of amounts paid for recording deeds	32 00
From preparing advertisements of sale	105 90
From cost of advertising estates	101 90
From posting notices of sale	67 00
From making Collectors' deeds	101 00
From making affidavits of sale	25 50
From Court costs in civil suits	70 85
From other fees not before enumerated	16 30
	$1,260 48

Which amount has been duly paid into the City Treasury.

Very respectfully,

WM. W. DALLINGER,
City Treasurer.

REPORT

OF THE

CITY MESSENGER.

CAMBRIDGE, Dec. 20, 1889.

To the Honorable the City Council of the City of Cambridge: —

GENTLEMEN: In compliance with the City Ordinance, governing the purchase and delivery of stationery, the undersigned herewith presents his annual report of the amount purchased during the year, with a statement of the deliveries made (as per requisitions on file) to the various departments, and the amount of stock on hand at the close of the year ending Nov. 30, 1889.

Stock of stationery on hand, Dec. 1, 1888	$225 31
Purchased during the year	1,742 92
Total	$1,968 23

Delivered to heads of departments as follows: —

Street	$29 27
Engineering	31 03
Auditor	97 87
Treasurer	675 14
Police	20 26
Lamp	7 81
Fire	3 11
Inspector of Milk	18 40
Clerk of Committees	124 55
City Clerk	232 19
Probation Office	5 97
City Messenger (use of City Council, etc.)	153 64
Assessors	220 09
City Solicitor	33 28
Soldiers' Aid Agent	7 03
City Missionary	2 76
Superintendent Public Buildings	17 59
Stock of stationery on hand	288 24
	$1,968 23

Respectfully submitted,

FRANCIS L. PRATT,
City Messenger.

REPORT

OF THE

TRUSTEES OF THE PUBLIC LIBRARY.

The Trustees of the Cambridge Public Library have the honor to submit their annual report for the year 1889, being the thirty-second since the library was assumed by the city, under the title of the Dana Library, the sixteenth since it became free to the public, and the tenth since it took its present name. This year has, undoubtedly, been the most important in the whole history of the institution, as the library has been removed into the new building provided for it by the munificence of Mr. Frederick H. Rindge, a native of Cambridge, but now a resident of Los Angeles, California. With this removal has come a great enlargement of the plans and methods of the institution, and an increase far beyond all anticipation, of the public interest. The simple fact that the library has received by donation, as the librarian's report shows, 1,047 volumes suitable for cataloguing, and this from 37 separate donors, — whereas, during the previous year it received but seven volumes of donations, — is a sufficient measure of this interest. The broken statistics of the actual use of books — broken by the fact that the library was closed during two months, for removal, — give further evidence in the same direction. The number of books borrowed during 1888 was 86,221 for twelve months; an average of 281 per day. The number borrowed during 1889 was 79,961, for ten months; an average of 304 per day. When it is remembered that the two months of closing necessarily checked the demand for books for several weeks before the actual closing took place, this increase will be still more noticeable. The largest number taken in any one day in 1888 was on Jan. 14, (647) and in 1889, Nov. 23, (760); and here again the increase is greater than it seems, as January is a month when the demand is

usually much greater than in November. No one knows so well as those who have charge of a public library that the mere number of books taken is a very incomplete test of its usefulness; but it is the most direct and visible test, and may therefore be properly placed foremost.

The library was closed to the public during June and July, and reopened on the first of August. In connection with the reopening several important measures of improvement were determined upon by the trustees, and were gradually put into operation. These may be thus classified. (1.) The Reference Library. (2.) The Local Delivery System. (3.) The School Delivery System. (4.) The Cambridge Memorial Room.

(1.) It was an essential part of the plan adopted for the new building, that there should be a large and attractive reading-room, apart from the room provided for newspapers only; and that this larger room should contain a number of valuable works of reference, with sets of periodicals, and even of the writings of standard authors. All these are to be freely accessible to the public, without the necessity of applying to any librarian, — although the librarians are always glad to give information or guidance. This secures what is an inestimable advantage, especially for young people, the habit of personal contact with books, and the process of seeking out, perhaps through many blunders, the information desired. As a rule, the books in this room are not to be taken from the library; the object of this restriction being, that no person coming to consult a book may ever have the disappointment of finding that it is gone. In many cases, however, books have been duplicated, so that there is one copy always in circulation and another always within the walls. The new arrangement has been highly appreciated by the public, and no injury has, as yet, been received by any of the books.

(2.) The second point inaugurated in the new departure has been the Local Delivery System. It has been found, in the experience of other cities, and notably in the neighboring city of Newton, that great good could be done by establishing, in different parts of the city, local stations, where books could be regularly delivered and collected by an official carrier; thus

equalizing distances in some measure, and making the library everywhere available. How great was the need of this will be obvious when we consider that the Board of Trustees, in their report for 1886, used this language: "Seldom are we visited by a resident of Ward 3 or Ward 5." The trustees for this year, warned by this experience, established four sub-stations, as follows: at Edward Thorndike's (617 Main Street), E. C. Gove's (Main and Washington), W. J. Gallagher's (Cambridge and Third Street), J. W. Hunnewell's (226 North Avenue). It was arranged that books applied for at these stations should be delivered three times a week (Tuesday, Thursday and Saturday), the books returned being collected on the same days. Thus, on Saturday, Dec. 5th, the books delivered were as follows: Thorndike's, 46; Gove's, 10; Gallagher's, 49; Hunnewell's, 56. It will be seen that the largest demand came from the two wards which formerly, by the statement of the trustees, had little to do with the library. Application has lately been made, which will doubtless be granted, for an additional station in the vicinity of Mount Auburn, and it is probable that a similar request will yet be made from the vicinity of the Willard School-house, in Ward 4. In the city of Newton — which is, however, more scattered, geographically, than Cambridge — there are nine such stations. It is possible that some of these delivery stations may in time, as is the case with the Boston sub-stations, have local reading-rooms and branch libraries connected with them, but all such plans must lie far in the future. The main thing now is to so develop the local delivery system that borrowers may come to rely on it as confidently as on the main library. The accompanying disadvantage, however, will always be, that they cannot, as at the main library, consult personally with the librarian as to selecting other books, in case those they have selected are out.

(3.) After the Local Deliveries were found to work smoothly a system of School Deliveries was initiated. The teachers being called together for this purpose by the School Committee, to the number of about sixty, the plan of the proposed delivery was submitted to them and their suggestions were received. Under the plan adopted the deliveries were made weekly to each school — some on Monday, some on Wednesday, and some

on Friday — baskets for the purpose being provided by the School Committee. Ten books were allowed to each teacher of the high schools or of the upper grade of grammar schools, the teachers being responsible for the books, and using them at their discretion among their pupils. The teachers were allowed to select their own books, or to receive aid from the librarians in so doing. No doubt the full utility of such a plan must imply a considerable duplicating of favorite books, and this has already been entered upon in a small way by securing extra copies of the "Bodley Books," "Zigzag Journeys," and the like; but even in the infancy of the enterprise satisfactory results are shown. The whole number sent out to the different schools during a recent week (Dec. 4 to 9) was as follows: —

Allston school	20
Harvard school	37
Webster school	80
English High school	25
Latin school	14
Putnam school	20
Thorndike school	34
Wellington school	30
Shepard school	20
Washington school	49
Peabody school	16
	345

It is found in other places that the School Deliveries have a perceptible influence not only on the quantity but on the quality of books issued from the library — at once diminishing the proportion of inferior fiction, and increasing that of works of real value. It is also capable of great extension, being applied with success in Newton even to the primary school grades.

(4.) The plan of a Cambridge Memorial Room, to include historical and biographical memorials of our city and its sons, was provided for in the original plans for the new building, but has been delayed in operation by the necessity of carrying out the foregoing aims. Under the auspices of the committee having these measures of reorganization in charge, a public meeting was held at the Manual Training School in the spring to explain this and other purposes of the trustees, and at this meeting a committee of twenty-five citizens was appointed by

His Honor the Mayor to coöperate in the work of filling and arranging the Cambridge Memorial Room. This committee has already rendered important assistance in the way of collections, and has just issued, with the approval of the trustees, an appeal to the public on the subject. It is proposed to devote the outer room mainly to historical memorials, and books or manuscripts referring to the history of Cambridge, while the inner room will be devoted to the works of Cambridge authors and artists, including, it is hoped, many MS. memorials and portraits. It is not proposed to place in this room the memorials of the municipal history of Cambridge, or the portraits of those who have taken prominent parts in that, since for those memorials the new City Hall would seem the more fitting place, but all else that concerns Cambridge would seem properly recorded here. For instance, there have been already presented to the Memorial Room the bound records of three of the earlier literary associations of our city, the (second) Social Library of 1827, the Franklin Library Association of 1843 (8 vols.), and the Irving Literary Association (2 vols.), all preserving in their recorded addresses, proceedings and debates, an indestructible memorial of the studies and aspirations of the last generation and its predecessor. Such things are unique, and the place for them is a town or city library, which should also aim to possess, more completely than they can be brought together anywhere else, the memorials of its men of note.

Besides these larger matters, several smaller points were included in the new departure made by the Public Library. One of these was the extension of hours, these being now extended to include the whole time from 10 A. M., daily, to 9 P. M., although no books can be taken for the last hour. This has the important result that students can avoid, if they wish, the hours when the rush of borrowers is greatest, and so secure more quiet for themselves and more attention from the librarians. Another change is in the lowering by one year the age of borrowers, from fourteen to thirteen. This is in conformity with the tendency of public libraries; the Boston Library now puts the age at twelve. We have also followed the example of the Boston Library, and the general tendency, in ceasing to cover books, except fiction and "juveniles." It is

now generally admitted that books are better cared for, as they are certainly more attractive, if they go out uncovered. The paper cover catches dirt more easily than the book-cover itself; and the friction of the paper cover tends to wear out the binding at its weakest point.

The large donations to the library have often brought an added expense, though a very welcome one, in the direction of binding sets of periodicals and other books; and the various miscellaneous expenses attending the removal, with the necessity of taking this time to replace lost or worn-out books, have left less money than usual to spend on current literature. We have kept along with the tide in this respect, however, reasonably well; but the great and obvious need of the library is a sufficient supply of money to furnish what may be called the *background* of the library, namely, extended works of reference, sets of periodicals, large scientific works, and complete sets (sometimes in duplicate) of the works of standard authors. Our High Schools and the private schools of Boston and Cambridge are constantly offering stimulus and suggestion to growing minds; they raise questions; they open lines of inquiry, and all these things create a demand on our library, and a healthy and legitimate demand. This ulterior and continuous demand we are in no condition to meet. We have a well-selected library of 20,000 volumes, more or less, — by estimate, not by actual count, — where we need one of 40,000; and this not a mere accidental accretion of books, but equally well selected. We need $10,000, laid out carefully within a year, to put our library in a condition to do the work which it is now ready to do. Any amount larger than this would require a longer time for spending. There is nothing unnecessarily large in this estimate. The city of Gloucester, a much smaller city than Cambridge, has a public library now, about as good as ours; and it has just received a bequest of not less than $120,000 for books.

Until this year our Library has received but one such legacy, the Fay fund of $1,000; to which this year has added $2,000 from Daniel P. Cummings; only the income of these donations being, however, accessible. A movement has, however, been set on foot by a citizens' committee, which promises the precise

result at which we aim — the purpose being to raise $30,000, some $13,000 of which has been already subscribed. No portion of this fund has as yet been transferred to the Trustees of the Library; but the Library has derived great benefit from it in two directions. One of the largest subscribers, Hon. H. O. Houghton, subscribed $1,000 in the publications of the great bookselling house of which he is the head, and about half this amount has already been drawn in books, selected by the trustees through their purchasing committee. By a temporary arrangement with the Citizens' Committee, another list of books, largely scientific and technical, was purchased and paid for by the Treasurer of the Citizens' Fund, as an instalment of that fund. It has been thought best, however, to defer further purchases, under this temporary arrangement, until the time when the Citizens' Subscription Fund, or at least such instalment of it as may seem desirable, shall be regularly transferred to the Library Trustees. It is exceedingly desirable that this should be done at an early period; for although some progress has been made in preparing lists of books for purchase, yet many books can be bought to better advantage in England; and there is a danger of postponing the actual receipt of those imported until too late for this winter's use. It is unnecessary to say that the Trustees and the community at large feel under very great obligations to the labors of the Citizens' Committee, and to the donors of the prospective fund.

The library is under great obligations to those who, at some pains to themselves, have brought gifts varying in quantity and value, but all showing the same good-will. The fact that we have in town many valuable private libraries should make it easier for us to build up a large public collection, since all who own such libraries have duplicates, sooner or later, of which to dispose, and they can help us either by gift or exchange. But many who have not large libraries possess something which would be of the greatest value to us, in those collections of unbound periodicals, often in broken or incomplete volumes, which would yet, if bestowed on us, complete sets of the greatest value. We are in this way laboring to complete, for instance, our sets of the *North American Review*, of Littell's *Living Age*,

of the New York *Nation*, and many other periodicals which now we possess in incomplete form, and are making up, perhaps, number by number. It is not an uncommon thing for application to be made by a teacher or a student for some article in the precise number of one of these publications which is wanting to our set, and which may yet be reposing in the garret of some one who would gladly give it to the library if it only occurred to him. Again, there are many books of which we need duplicate copies, and sometimes a dozen duplicates, for school or other use. A single casualty or exciting event, like Stanley's African expedition, will sometimes create a sudden demand for books relating to a certain part of the world or a scientific point, and however great the supply the demand exceeds it. So in the study of a particular author there may be a demand from a dozen quarters for the simultaneous reading of a book, which for a year or two has not had a single reader. Donors of books need not, therefore, fear giving duplicates, and sometimes a book which, in itself, looks valueless may turn out very valuable in a public library.

The newspaper reading-room has been removed up stairs, for quiet and freedom from interruption. It is already obvious that our lower reference-room and waiting-room, large as they at first seemed, are too small, and must, at some future period, be enlarged. The so-called stack-room proves all that can be desired, and will suffice for a long time, there being also ample provision for any enlargement in the distant future. The usual report of our excellent librarian is appended. With the increased use of the library she requires additional assistants, and it is desirable that two should be provided. We submit, accordingly, as an estimate of needs for the coming municipal year, such an appropriation as will, with the revenue, net for the use of the library at least the sum of $12,000.

There was appropriated by the city government, for the fiscal year, ending Dec. 1st, 1889, the sum of $9,500.

The expenses of the library have been as follows:

Salaries	$3,555 68
Books and Periodicals	1,694 41
Binding	828 56
New Furniture and Fixtures	1,034 32
Rent of old Library Room to Aug. 1st	750 00
Insurance	536 47
Printing and Stationery	286 87
Moving Expenses	75 75
Fuel	315 50
Gas and Water	315 60
Sundry Items	100 36
	$9,493 52

SAM'L. L. MONTAGUE,
HENRY H. GILMORE,
CHARLES WALKER,
OLIVER H. DURRELL,
T. W. HIGGINSON.
A. F. SORTWELL,
ALBERT M. BARNES,
J. H. H. McNAMEE,
E. A. BINGHAM.

REPORT

OF

THE LIBRARIAN.

To the Trustees of the Cambridge Public Library: —

GENTLEMEN: With earnest congratulations on the prosperity of the Library in its new home, the Librarian presents this, her sixteenth annual report.

The dedication of the beautiful building, given to the city by Mr. Rindge, occurred on the 29th of June, and was attended by a large number of citizens. The circulation of books having been suspended during June, the Reference Library was moved and placed on the shelves prepared for it in the reading room, before the dedication. The remainder of the books were moved during the first week in July, and the three weeks following were devoted to arranging them as seemed most convenient for rapid delivery. The arrangement at present is as follows: Basement, — periodicals and government publications. First floor, — fiction and juvenile books. Second floor, — biography, history, and travel. Third floor, — miscellany, science, art, and poetry.

The Library had not been called together since 1875, and it was found that a large number of books were too soiled and worn to be retained in the Library, many of them having been in use since its formation in 1856. Five hundred and eight volumes have been replaced, and others are yet to be purchased.

During the summer months numerous donations were received, a list of which, with their donors, is submitted with this report. Such of these as were not duplicates of books already in the Library, or, from their size or character, not adapted to circulation, have been catalogued, and appear in

the additions of the year. Among the donations were several large volumes of newspapers. For these, suitable cases have been made, and placed in the newspaper reading-room, to which purpose it was thought best to devote the room over the vestibule.

The Cambridge or Memorial rooms are beginning to show the purpose to which they are set apart. Among the first donations to them were the busts of Longfellow, Agassiz, and Judge Parker, the work of Henry Dexter, the Cambridge sculptor. Other gifts of historic relics, books, autograph letters, manuscripts, etc., have been received, and more are promised.

It is hoped that we may, in time, secure a valuable collection of the early editions of works by Cambridge authors, and books relating to Harvard University.

Two interesting collections of valuable autograph letters have been loaned to the library, affording much pleasure to our numerous visitors.

The reading-room and reference library attract much attention, and the tables surrounded by young and adult readers offer constant testimony to the usefulness of the library. Already there is, at certain hours, demand for more seats in both this and the delivery room.

The regular work of the library has greatly increased since its removal. We have gained many more readers than we have lost, and the number of card-holders has reached 5,083 since the opening of the library on the 5th of August.

Local deliveries were established early in September at North Cambridge, East Cambridge, and two in Cambridgeport. The number taken from the library through these is constantly increasing, and bids fair, in time, to rival the direct issue from the library. Early in November, the teachers of the high schools, and of the upper classes in the grammar schools, were allowed ten cards each, for use in connection with school work. The selection of their books on given subjects adds much to the duties of the librarian, but it is felt to be a pleasure, since it is making the library a means of direct instruction, a result so long desired by the Trustees. Among the subjects thus studied are early discoverers, colonial times, Boston, caves, mining, Rocky Mountains, Russia, letter-writing, the Northmen, mound

builders, countries of Europe, English language, the Civil War, Australia, Arctic explorations, and others connected with geography or history.

The increased library work necessitates the employment of more attendants, and the Librarian asks that two additional assistants be appointed for the coming year, one for desk work, and one to take charge of labelling and numbering books, etc.

The senior assistant having charge of the local and school deliveries needs one assistant to help in the registration and work on the books.

The statistics here given are for ten months, the library being closed to the public during June and July. The circulation is rapidly increasing, and the library was never more appreciated.

BOOKS ISSUED.

First quarter	24,251	Average per day	324
Second quarter	21,832	Average per day	288
One day in June	450		
Third quarter (August only)	5,214	Average per day	227
Fourth quarter	25,903	Average per day	341
	77,650	(Library direct)	295
By local delivery	2,311	(Three times per week)	
Total	79,961	(Three times per week)	304
Largest issue for any day Nov. 23			760
Of these 140 were sent out by the local deliveries.			
Smallest issue April 30			117
Number issued to teachers on special cards during November			329

The issue for this, the last quarter of the year, has been much larger than that of previous corresponding months.

BOOKS ADDED.

	Purchased.	Given.	Exchanged.	Total.
First quarter	196	1	..	197
Second quarter	189	2	2	193
Third quarter	141	614	..	755
Fourth quarter	382	430	2	814
Total for year	908	1,047	4	1,959

Two hundred and twenty-nine of these have been purchased or donated from the citizen's subscription fund.

Estimated present number of library 22,398

LIST OF DONORS OF BOOKS CATALOGUED, EXCLUDING DUPLICATES.

Abbott, Rev. F. E. (unbound)	11
Allen, Rev. J. H.	9
American Antiquarian Society	7
Bartlett, Mr. John	35
Bulfinch, Miss S. G.	1
Bennink, Mr. C. G. H.	3
Cogswell, Dr. E. R.	2
Cogswell, Mr. Francis	4
Cooke, Mrs. H. R. W.	1
Dana, Miss	1
Duroy, Mr. C. W.	1
Fisk, Mrs. J. C.	21
Gould, Dr. B. A.	226
Harris, Miss C. M.	47
Hayden, Hon. E. D.	1
Higginson, Miss A. S.	13
Higginson, Col. T. W.	144
Hinman, Mrs.	1
Lene, Adolph.	1
McKaye, Mrs. M. E.	25
Mansfield, Mr. Daniel G.	28
Massachusetts, State of	18
Norton, Prof. C. E.	5
Orne, Miss C. F.	2
Palfrey, Miss	3
Peabody, Dr. A. P.	147
Reed, Mr. George B.	1
Rolfe, Mr. W. J. (11 bound)	63
Salem Public Library	1
Sewall, Mrs. Harriet W.	42
Smead Warming Company	1
Story, Mr. F. W.	1
Swift, Mr. George B.	1
Taylor, Mrs. J. B.	9
United States	165
Wallcut, Miss M. R.	5
Wyman, Dr. Morrill	1
	1,047

We are also indebted to Prof. W. W. Goodwin, Misses Wyeth, Murdock and Bullard for a large number of unbound periodicals; to Judge Orcutt, and to Mr. R. I. Atwill, for several volumes of government publications. Other gifts have been sent, anonymously. To all we return sincere thanks.

Two books have been lost since the library was moved, the person who took them having moved out of the State.

During the year 2,546 postal cards have been sent for books over-due.

The amount received for fines and catalogues:

First quarter, fines	$40 41
Second quarter, fines	52 12
Third quarter, fines and catalogues	20 00
Fourth quarter, fines	36 75
Old paper sold	3 20
Catalogues	5 00
	$157 48

For which amounts the City Treasurer's receipts have been submitted with the quarterly reports.

In estimating the expenses of another year it should be borne in mind, that to make the school-use of the library a success, a large number of books now in the library must be duplicated.

The present arrangement is that each school should be served once a week: six in connection with the local deliveries, and five on Friday, making an extra day for the carrier.

The question of a supplement to the catalogue must receive early consideration. The bulletins now number six, and a seventh will soon be printed.

All of which is repectfully submitted.

ALMIRA L. HAYWARD, *Librarian.*

REPORT

OF THE

JOINT STANDING COMMITTEE ON PUBLIC PROPERTY.

The Committee on Public property submits herewith its usual annual report, in review of work accomplished during the year 1889.

So much of the labor and responsibility formerly wholly borne by this Committee is now shared by the Superintendent of Public Buildings, that the duties of the Committee are measurably lightened, and the public property, perhaps, better cared for than it could have been in former years. Inasmuch as the report of the Superintendent of Public Buildings will enter fully into the details of work done, and will present estimates of probable, necessary expenditures during the coming year, this report will consist only of a brief review and summary of what has been before the Committee, together with the usual supplementary list of city property.

The principal improvements forwarded under direction of the Committee, in the year 1889, were the following: —

NEW BUILDINGS.

1. Peabody School-house, Linnæan Street.
2. Putnam School-house, Fourth Street.
3. English High School-house, Broadway.

IMPROVEMENTS AND REPAIRS.

1. Gore School-house, Gore Street.
2. Gannett School-house, Jefferson Street.

A considerable outlay has been made in and about these buildings, in the endeavor to improve their sanitary arrangements, and meet the requirements of the State Inspector of Public Buildings. Many of the school-houses were painted and otherwise renovated during the summer vacation, and every effort, consistent with the public welfare, has been made to maintain the buildings in the best possible condition.

The Peabody School-house, on Linnæan Street, the work upon which was begun in 1888, was completed and occupied early in 1889, and the contractors for the Putnam School-house are making rapid progress upon that building. The contract for the erection of the English High School building was awarded in the month of August, and operations thereon were begun immediately thereafter.

Following is a statement of the expenditures, under various heads of appropriations, approved by this Committee, to Dec. 1, 1889, and by the Committee of the year before, for the month of December, 1888. All repairs are made under the direct charge of the Superintendent of Public Buildings. Expenditures upon Engine-Houses and Police Stations, heretofore charged to Fire Department and Police, are now placed to the account of the appropriations for City Buildings, Care and Repairs. The cost of repairs upon the Public Bath-house and the Rifle Range, are charged to the same account.

EXPENDITURES.

HEADS OF APPROPRIATIONS.

City Buildings (care and repairs): —		
City Hall (including fuel)	$3,205 63	
City Building, Brattle Sq., including fuel	3,923 73	
City Building, Central Sq., including fuel	2,923 38	
City Building, Fourth Street	390 55	
City Building, North Avenue	314 27	
Engine House No. 2, Main Street	78 10	
Engine House No. 5, Inman Square	35 01	
Hook and Ladder House No. 2, Portland St.	45 08	
Bath House, River Street	756 37	
Rifle Range, Belmont District	480 47	
Incidentals	442 01	
		$12,594 60

Incidental Expenses: —		
Care of Public Clocks	$169 10	
Election Expenses, fitting up polling places	2,017 18	
Miscellaneous	420 86	
		$2,607 14
School-houses (care and repairs): —		
Fuel and weighing (approved by Committee on Fuel)	$10,992 24	
Gas and Electric Lighting	779 00	
Janitors	13,634 05	
Repairs and furnishing	7,425 87	
Supplies and sundry expenses	2,596 75	
Extra labor	661 41	
		36,089 32
School-houses (new and furniture): —		
Peabody School-house, Linnæan Street	$21,716 00	
Putnam School-house, completion	14,400 00	
English High School-house	4,654 35	
Land for School-house, Allston Street	6,000 00	
		46,770 35
		$98,061 41
Less items for fuel (approved by the Committee on Fuel): —		
City Hall	$358 78	
City Building, Brattle Square	911 26	
City Building, Central Square	904 81	
School-houses	10,992 24	
		13,167 09
Leaving amount of bills approved by this committee,		$84,894 22

The items for fuel are given in the foregoing, in order to show the total cost of maintenance of the several buildings, but are deducted from the aggregate to show the amount of bills approved by this Committee. All fuel is contracted for by the Committee on Fuel, and the bills therefor are approved by that Committee.

The amount of bills approved by the Committee on Public Property in 1889 was	$84,894 22
Bills approved in 1888 was	57,365 05
Increase in 1889	$27,529 17

This increase is wholly owing to the construction of new buildings, the amount expended upon repairs being less than that of the previous year. About four-fifths of the cost of the Peabody School-house was paid out of this year's appropriations, while there was also considerable expenditure upon the Putnam School-house, and the new High School building, as well as for the purchase of land as a site for a Primary School-house, to be erected in 1890.

The following is the usual comparative statement of expenditures under the several heads of appropriations:

CITY BUILDINGS.

Under this head are included all buildings (except schoolhouses), the repairs upon which are made under the direction of the Committee on Public Property.

CITY HALL.

The amount expended for care and repair of this building was as follows: —

For Fuel	$358 78	
Gas and electric lighting	600 21	
Janitor	1,201 90	
Extra cleaning	587 00	
General repairs	191 95	
Furnishing and miscellaneous	265 79	
		$3,205 63
In 1888 the cost was	$3,536 39	
In 1889 the cost was	3,205 63	
Decrease	$330 76	

Inasmuch as the new City Hall Building now being erected by Mr. Frederick H. Rindge, upon the city land on Main Street, will soon be ready for occupancy, but little has been expended in repairs upon the present building. Notwithstanding the excellent care which has always been given to our City Hall, its severe daily usage by almost the entire community, subjects the building to an amount of wear to which no other city building is liable.

CITY BUILDING (BRATTLE SQUARE).

The cost of maintenance of the City Building, Brattle Square, in 1889, was as follows: —

For Fuel	$911 26	
Gas and electric lighting	768 72	
Janitor	1,251 43	
General repairs	632 32	
Miscellaneous furnishings	50 21	
Total		$3,613 94

The cost in 1888 was	$3,648 08
The cost in 1889 was	3,613 94
Decrease in 1889	$34 14

This building is principally used for city purposes, the lower stories being devoted to the police and fire departments. The Third District Court is held in the second story, and in the upper story is the armory of Company B, 5th Regiment M. V. M. From these a rental is received as follows;

Armory	$400 00
District Court	350 00

CITY BUILDING (CENTRAL SQUARE).

The cost of Central Square building in 1889 was as follows:

For Fuel	$904 81	
Gas	229 03	
Janitor	1,201 90	
General repairs and furnishing	268 81	
Miscellaneous	81 21	
Total		$2,685 76
The cost in 1889 was	2,685 76	
The cost in 1888 was	2,490 04	
Increase in cost	$195 72	

This building is chiefly devoted to city uses, part being occupied as an armory by Company B, 1st Regiment M. V. M. For this a rental is received from the Commonwealth. As was expected, the repairs upon the building are somewhat in excess of those of the preceding year.

OTHER CITY BUILDINGS.

The expenditure in 1889 upon all other city buildings included in the classification hereinbefore made was $2,541.86.

The outlay in the same direction in 1888 was	$2,919 99
Expended in 1889	2,541 86
Decrease	$378 13
The amount appropriated for care and repairs of city buildings was originally	$12,000 00
Subsequent increase by transfer	1,000 00
Total	$13,000 00
Amount expended	12,594 60
Balance unexpended	405 40

SCHOOL-HOUSES.

The appropriations for construction and care and repair of school-houses in 1889 were as follows: —

	Original Estimates.	As subsequently changed.
School-houses (care and repairs) . .	$37,000 00	$36,141 79
New High School	200,000 00	200,000 00
Putnam School	30,000 00	45,000 00
Peabody School	21,716 26	21,716 26
Land in Ward Four	6,000 00	6,000 00
	$294,716 26	$308,858 05

The subject of the erection of an English High School building was the most important matter that was considered by the committee during the year, and a special appropriation of $200,000, for the purpose, was obtained from the City Council on recommendation of the Committee on Finance. This committee was authorized to receive proposals, and to contract for the erection and completion of the building.

The contract was subsequently awarded to J. E. Giddings & Son, of Somerville, for the sum of $170,067. This was exclusive of the warming and ventilation of the building, the contract for which was awarded to Ingalls & Kendricken, of Boston, for the sum of $13,880. It was estimated that the building would contain 12,810 feet of heating surface, and would require the annual consumption of 200 tons of coal.

The amount appropriated for completing the English High School-house was	$200,000 00
Amount expended in 1889	4,654 35
Balance to be re-appropriated in 1890	$195,345 65

An appropriation of $30,000 was made for the further enlargement and completion of the Putnam School-house, one wing of which was finished in the year 1888. The appropriation was found to be insufficient, and a further appropriation was made of $15,000. The contract for this work was awarded to D. Sullivan & Son for the sum of $38,325. This did not include the heating apparatus, the contract for which was awarded to the Smead and Northcott Company for the sum

of $4,750, which company had already introduced its system in the Peabody School-house. The work on the Putnam School-house is rapidly progressing, and the building will be ready for occupancy at the beginning of the September term of 1890.

The amount appropriated was	$45,000 00
Amount expended in 1889	14,400 00
Balance to be re-appropriated in 1890	$30,600 00

The Peabody School-house, the work upon which was begun in the year 1888, was finished and occupied early in 1889. The balance of the appropriation for this building, unexpended at the close of the last financial year, was re-appropriated in 1889.

The amount appropriated was	$21,716 26
Amount expended	21,716 00
Balance unexpended	26

The total cost of this building was as follows: —

Amount expended in 1888	$12,128 74
Amount expended in 1889	21,716 00
Total	$33,844 74

This sum includes the cost of land, building and furnishing, the cost of the building proper being stated by the Superintendent of Public Buildings at the sum of $25,328.

The fact of the pressing need of another primary school-house in Ward Four having been brought to the notice of the City Council by the School Board, careful inquiry and search was made by this committee for a suitable lot of land for the purpose. Several desirable lots being offered, a selection was finally made of the lot at the westerly corner of Allston and Brookline Streets, the same comprising an area of about 26,650 square feet. This land was purchased for the sum of $6,000. It is expected that a brick school-house will be erected thereon during the coming year.

This committee has given much attention to the sanitary condition of the various school-houses, and several hearings have been given to members of the School Board and others interested in the matter. With the desire to ascertain and

remedy any existing defects in the sanitary arrangements of these buildings, an inspection was made of certain school-houses, before the close of the school year of 1889. At the request of this committee, a sub-committee consisting of Alderman Frasier, B. H. Steele, Superintendent of Public Buildings, John T. White, State Inspector, and Dr. A. F. Holt, Health Officer, made a tour through the city, and examined, among other school-houses, the following, viz.: the Allston, Gannett, Otis, Gore, Shepard, Washington, Webster and Willard. Such defects as were found to exist in the sanitary arrangements of these buildings, deemed to be prejudicial to the health of teachers and children, were especially noted, and efforts were subsequently made to remedy the same.

The appropriation for school-houses (care and repairs) as made at the beginning of the year, was	$37,000 00
To this there was added certain revenue received and credited to this appropriation	141 79
	$37,141 79
Transferred to the appropriation for city buildings (care and repairs)	1,000 00
Net amount of appropriation	$36,141 79
Amount expended	36,089 32
Balance unexpended	$52 47

For details of the expenditures under this head, reference may be had to the report of the Auditor of Accounts, and full details of work done upon the various city buildings and school-houses, with his estimates for the coming year, may be found in the report of the Superintendent of Public Buildings.

Following is the usual tabular statement of the cost of maintenance of each school-house. The item of gas consumed is included under the general head of furniture and supplies.

MAINTENANCE OF SCHOOL-HOUSES.

Names.	Fuel.	Repairs.	Furniture and Supplies.	Extra Labor.	Janitors.	Total.
Agassiz	$281 61	$ 54 05	$ 18 94		$503 06	$857 66
Allston	521 70	459 98	43 49		502 60	1,527 77
Boardman	195 54	173 20	4 68		225 54	598 96
Bridge	56 24	14 88	14 29	$ 12 00	116 00	213 41
Corlett	65 23	26 42	4 95	4 00	233 92	334 52
Cushing	56 84	244 89	7 95	8 00	233 92	551 60
Dana	85 94	255 86	75	16 00	225 54	584 09
Dunster	170 34	63 95	11 90	8 00	311 91	566 10
Felton	149 44	183 46	12 95	16 00	225 50	587 35
Gannett (Old)					375 96	375 96
Gannett	278 73	290 65	34 80	1 50	351 89	957 57
Gore	595 20	202 47	27 04	54 00	451 04	1,329 75
Harvard	737 31	190 52	159 38	75	852 54	1,940 50
High	472 02	125 26	340 12	17 25	852 54	1,807 19
Holmes	196 30	192 75	1 32	12 00	302 94	705 31
Lassell	141 34	67 28	40 12	16 00	311 91	576 65
Latin	234 73	143 66	56 73	48 00	503 06	986 18
Lowell	224 66	324 09	1 82		253 91	804 48
Mason	82 36	52 70	14 16	8 00	225 50	382 72
Otis	191 11	132 66	14 43	24 00	267 93	630 13
Peabody	253 00	60 02	147 94	7 38	198 00	666 34
Putnam	35 60	145 34	158 96	16 00	451 04	806 94
Quincy	139 22	203 21	12 11	16 00	253 95	624 49
Reed	109 35	185 50	18 92	8 00	311 91	633 68
Riverside	174 88	303 85	10 00	12 00	311 91	812 64
Sargent	133 31	322 65	2 48	16 00	200 96	675 40
Shepard	292 80	310 85	134 78	50	503 06	1,241 99
Stearns	141 48	243 14	6 39	12 00	200 96	603 97
Tarbell	241 82	341 52	4 45	17 00	311 91	916 70
Thorndike	409 54	787 69	64 65	3 00	535 81	1,800 69
Washington	577 89	108 52	122 82	16 00	504 78	1,330 01
Webster	603 28	275 91	367 03	10 50	807 72	2,064 44
Wellington	512 27	361 37	90 77	8 00	375 97	1,348 38
Willard	272 62	101 29	56 59		567 86	998 36
Wyman	231 52	161 91	25 38	8 00	401 50	828 31
All Schools	2,127 02	324 37	1,332 66	265 53	369 50	4,419 08
	$10,992 24	$7,425 87	$3,375 75	$661 41	$13,634 05	$36,089 32

CITY LANDS AND SURRENDERED ESTATES.

This committee has nominally had charge of this species of city property, although the matter of its sale has been in the hands of the Committee on Sale of City Lands, which committee consisted of the President of the Common Council and the members of the Committee on Public Property. Land on Sixth Street was sold at the beginning of the year; the lots sold comprising the west lot, formerly of the South Dock, and a portion of the lot at corner of Sixth Street and Broadway. The amount received from this sale was $2,457.47.

MILL POND LANDS.

Inasmuch as no arrangements have as yet been made with the owners of lands adjoining the upper Mill Pond basin, it has been deemed inexpedient to sell any lots in this district. Beyond this fact there is nothing to report concerning this property.

TAX-TITLE LANDS.

The Committee on Sale of City Lands sold a part of the lot of land at the corner of Broadway and Sixth Street. The sale was made in the latter part of the year 1888, the payment not being received until the beginning of the financial year of 1889. The land sold comprised an area of 5,198 square feet; and there is now left a square lot, bounded on Broadway and Sixth Street, containing 12,319 square feet.

JANITORS.

The total amount paid to janitors in the year 1889 was as follows:

Janitors of School-houses	$13,634 05
Janitor of City buildings	3,655 23
Total	$17,289 28

These public servants are under the direction of the Superintendent of Public Buildings, and further reference to them may be found in his annual report.

CITY PROPERTY.

In accordance with the usual custom, the following schedule is given of the real estate owned by the city. In cases where the property is in charge of departments and boards other than this committee, the name of such department or board is given. An appraisal has been made by the Assessors of the value of some of the buildings and lands, and in such cases the value so estimated is given.

ALMSHOUSE ESTATE.

Land and buildings situated on Tannery Street, Cambridge, and in Somerville and Arlington, as follows:

Land in Cambridge	$14\frac{242}{1000}$ Acres
Land in Somerville	$7\frac{954}{1000}$ Acres
Land in Arlington	$\frac{1}{10}$ Acres
Total	$22\frac{306}{1000}$ Acres

The land in Cambridge includes thereon the almshouse building, the new almshouse cottage for patients, the new brick school-house, and the old one-story building formerly used as a hospital. Some of the outbuildings, including a portion of the stable, are located upon the land in Somerville. There is also a stone ledge upon the Somerville land. A large portion of this land having heretofore been laid out in lots for sale, and placed in charge of a special committee appointed for the purpose, the area of these lots is not included in enumeration before given.

The original cost of the almshouse property was about $45,000, which sum includes the amount paid for the farm, and the subsequent outlay for the erection of a stone almshouse and other buildings thereon. The almshouse cottage for the reception of patients, which was erected in 1885 at a cost of $1,830, and the two-story brick school-house built in 1888 at a cost of $5,600, are not included in the sum named.

The Assessors have put a valuation of $36,000 upon this entire property. (In charge of Overseers of the Poor.)

CEMETERIES.

Cambridge Cemetery. The cemetery is situated on the east bank of the Charles River, and extends from the line of lands of the Coolidge estate and land of the Mount Auburn Cemetery Corporation, to the Watertown line, the main entrance being on Coolidge Avenue, which forms its western boundary line. The total area of the cemetery lands is $65\frac{8679}{10000}$ acres. Included in this territory is the original portion containing $40\frac{8129}{10000}$ acres, and the additional purchase made in the year 1885, comprising an area of $25\frac{55}{1000}$ acres. Most of the land included in the cemetery was originally a part of the town of Watertown, and after its purchase for burial purposes was annexed to this city by Acts of the Legislature passed at different times.

The total cost to the city of these cemetery lands was about $92,000; but as they are not salable, no estimate has been made of their value.

Old Burial Ground. Garden Street, junction of North Avenue, containing 85,858 square feet of land. This land being dedicated to its present use, also has no salable value.

(The cemeteries are in charge of the Board of Commissioners of Cambridge Cemetery.)

CITY BUILDINGS.

Cambridge Public Library, new stone building, erected in 1888, upon land bounded by Broadway, Irving, Cambridge and Trowbridge Streets, and 135,666 square feet of land. The land was given to the city and the library building, erected thereon by Mr. Frederick H. Rindge, the entire cost having been borne by him. (The City Council has placed this property under the exclusive control of the Trustees of the Cambridge Public Library.) Valuation of land, $29,900.

Brattle Square Building. Brattle Square, Ward One, and land 16,153 square feet. Valuation: Land, $9,700. Building, $60,000. Total, $69,700.

Central Square Building. Junction of Western Avenue and Green Streets, and 13,028 square feet of land. Valuation: Land, $10,500. Building, $50,000. Total, $60,500.

City Hall. Main Street, corner Pleasant Street, and 12,881 square feet of land. Valuation: Land, $19,300.00. Building, $10,000.00. Total, $29,300.00.

City Hall (new). Building now being erected on city land, bounded by Inman, Main, and Bigelow Streets. The land was purchased for this purpose by the city in the year 1888, and contains 48,464 square feet. Cost of the land, $93,524.67. The City Hall is the gift of Mr. F. H. Rindge, and is erected by him.

City Building. North Avenue, near corner of Russell Street, comprising Engine House No. 4, Police Station 5, and the Ward Room for Ward 5, and land elsewhere mentioned in this schedule as being included in Engine House lot.

City Stables. Norfolk, Hampshire, and Tremont Streets, and 72,661 square feet of land. Valuation: Buildings, $16,000.00; land, $30,000.00; total, $46,000.00. (In charge of Street Department.)

Old Police Station. Norfolk Street, on City Stable lot. Valuation of Building, $1,000.00.

CITY LANDS (SALABLE).

Lot on Portland Street, east side, north of Engine and Hook and Ladder House, containing 18,011 square feet. Valuation: $5,500.00.

Land on the south side of Broadway, West Somerville, formerly part of Cambridge Almshouse land, divided into lots according to city plan, dated April 10, 1884, as follows:

On Endicott Avenue, so called, northwest side. Lots 60, 67, 76, 83, 92, 99, 108, 124	40,000 Feet
On Farragut Avenue, so called, southwest side. Lots 100, 107, 116, 123	20,000 Feet
On Farragut Avenue, northeast side. Lots 90, 101, 106, 117, 122	25,000 Feet
On Garrison Avenue, so called, southwest side. Lots 54, 57, 70, 73, 86, 89, 102, 105, 118, 121	50,000 Feet
On Garrison Avenue, northeast side. Lots 56, 71, 72, 87, 88, 103, 104, 119, 120	45,000 Feet
Total	180,000 Feet

These lots have been held at a valuation of four cents per foot, or $7,200.00 for the entire area.

Lot on Cambridge Street, north side, between Marion and Harding Streets, containing about 5,000 feet. Valuation, $2,000.00.

Lot on Porter Street, near Jefferson Street, containing 3578 feet. Valuation : $700.00.

CITY LANDS (RESERVED FOR USE).

Land on Norfolk Street, opposite City Stable yard, purchased in 1887, containing 39,600 square feet (in use by Street Department.) Valuation : $12,000.00.

Lot on Pilgrim Street, north side, containing an area of 23,700 feet, with buildings thereon belonging to the Sewer Department, the land being in use by that department. Valuation : Land, $5,900.00 ; buildings, $2,000.00 ; total, $7,900.00.

Lot on Auburn Street, south side, between Brookline and Sidney Streets, with buildings thereon belonging to the Cambridge Water Works. This lot is used by the Water Works Department and has an area of 33,300 square feet. Valuation : Land, $6,600.00 ; buildings, $3,700 ; total, $10,300.00.

Lot on River and Blackstone Streets, and private way known as Daye Avenue, formerly the river basin of the Mill Pond, containing 90,784 square feet. This is in charge of the Street Department, and is partially filled. When filled to grade it will be used as a wharf. Valuation : $12,500.00.

CITY FLATS.

Flats, opposite City Wharf, Main Street, south side, opposite junction with Harvard Street; in all, 162,379 square feet. Valuation : $8,000.00.

COMMONS AND PUBLIC SQUARES.

Cambridge Common. Garden Street, North Avenue, and Waterhouse Street. Area, 370,785 feet.

Public Square. Between Waterhouse Street and North Avenue. Area, 13,180$\frac{7}{10}$ feet.

Arsenal Square. Garden and Chauncey Streets and Concord Avenue. Area, 3,189 feet.

Public Square. Between Waterhouse Street and Garden Street. Area, 363 feet.

Public Square. Between Holmes Place and Cambridge Street. Area, 20,956 feet. This square is now in charge of the authorities of Harvard College.

Public Square. North Avenue, corner of Kirkland Street, on south corner. Area, 23,074 feet.

Public Square. North Avenue, corner of Kirkland Street, on north corner. Area, 33,357 feet.

Public Enclosure. Junction of Arrow and Main Streets. Area, 872 feet.

Broadway Park. Broadway, corner of Norfolk Street. Area, 107,181 feet.

Fort Washington. Waverly Street. Area, 42,123 feet.

Public Square. Junction of Pleasant and River Streets. Area, 1,569 feet.

Hastings Square. Brookline, Chestnut, and Henry Streets. Area, 29,999 feet.

Dana Square. Lake, Magazine, Lawrence, and Niagara Streets. Area, 33,531 feet.

Winthrop Square. Boylston, Winthrop, and Mount Auburn Streets. Area, 10,236 feet.

As nearly all these commons and squares are restricted to the uses to which they are dedicated, no valuation has been put upon the land.

ENGINE HOUSES.

House No. 1, Eliot Square, corner Mount Auburn Street, included with Ward 1 Building. Valuation included with that of the City Building, Brattle Square.

House No. 2, Main Street, near Winsor, and land, 3,150 feet. Valuation of land, $3,000; building, $5,000; total, $8,000.

House No. 3, Gore and Fourth Streets, and land, 4,220 feet. Valuation of land, $3,000; building, $12,000; total, $15,000.

House No. 4, North Avenue, near corner Russell Street, and land, 6,315 feet. Valuation of land, $3,000; building, $7,000; total, $10,000.

House No. 5, Hampshire Street, corner Inman, and land, 6,000 feet. Valuation of land, $3,000; building, $10,000; total, $13,000.

House, Hook and Ladder No. 2 and Engine House, Portland Street, corner of Thorndike Street, extended, and 11,931 feet of land. Valuation of land, $3,000; building, $12,000.

GRAVEL PIT.

Old Gravel Pit, in rear of Concord Avenue, southerly side, near Adams Street, containing 277,017 feet. (In charge of Committee on Roads and Bridges.) Valuation, $2,400 (about).

MILL POND PROPERTY.

Land on River Street, east of Putnam Avenue, formerly the upper basin of the Mill Pond, containing about 201,467 square feet. This land is laid out in lots, and a plan thereof has been put on record. The area given includes the streets shown upon said plan. Valuation, $30,000, or about 15 cents per square foot.

Land, formerly a creek, leading from River Street to Mill Pond, east of Putnam Avenue, containing 2,282 square feet. Valuation, $700.

SCHOOL-HOUSES AND SCHOOL-HOUSE LANDS.

Allston, Boardman Street, 15,193 feet of land. Valuation of land, $4,600; building, $18,000; total, $22,600.

Agassiz, Oxford Street, corner Sacramento Street, 19,689 feet of land. Valuation of land, $6,000; building, $18,000; total, $24,000.

Boardman, Winsor Street, corner School Street, 10,018 feet of land. Valuation of land, $4,000; building, $12,500; total, $16,500.

Bridge, Pioneer Street, Lower Port, 4,646 feet of land. Valuation of land, $1,400; house, $500; total, $1,900.

Corlett, Holworthy Street, and 10,000 feet of land. Valuation of land, $600; building, $3,000; total, $3,600.

Cushing, Cushing Street, nearly opposite Locust Street, 14,788 feet of land. Valuation of land, $1,000; building, $3,000; total, $4,000.

Dana, Centre Street, and 14,317 feet of land. Valuation of land, $4,300; building, $2,000; total, $6,300.

Dunster, Concord Avenue, near Sparks Street, and 10,000 feet of land. Valuation of land, $2,000; building, $4,000; total, $6,000.

Felton, Amory Street, corner Summer Street, and 15,000 feet of land. Valuation of land, $4,500; building, $6,000; total, $10,500.

Gore, Gore Street, between Third and Fourth Streets, and 9,900 feet of land. Valuation of land, $4,000; building, $25,000; total, $29,000.

Gannett (old), Columbia Street, between Lincoln and Cambridge Streets, and 8,802$\frac{7}{10}$ feet of land. Valuation of land, $2,500; building, $2,000; total, $4,500.

Gannett (new), Jefferson Street, and 14,934 feet of land. Valuation of land, $3,000; building, $12,000; total, $15,000.

Harvard, Broadway, corner Inman Street, and 20,494 feet of land. Valuation of land, $12,000; building, $40,000; total, $52,000.

High School, Fayette Street, Antrim Street, and Broadway, and 37,828 feet of land. Valuation of land, $15,000; building, $40,000; total, $55,000.

Holmes, Hilliard Street, and 11,182 feet of land. Valuation of land, $4,500; building, $6,000; total, $10,500.

Lassell, Charles Street, near Sixth, and 10,000 feet of land. Valuation of land, $2,500; building, $8,000; total, $10,500.

Latin, Lee Street, near Harvard, and 10,000 feet of land. Valuation of land, $5,000; building, $10,000; total, $15,000.

Lowell, Lowell Street, near Mount Auburn Street, and 12,033 feet of land. Valuation of land, $2,000; building, $12,000; total, $14,000.

Mason, Front Street, corner Jennings Court, and 10,000 feet of land. Valuation of land, $8,000; building, $2,000; total, $10,000.

Otis, Otis Street, between Fifth and Sixth Streets, and 8,270 feet of land. Valuation of land, $4,000; building, $12,000; total, $16,000.

Peabody, Linnæan Street, corner of Avon Street, and 21,813 square feet of land. Valuation of land, $5,400; house, $25,000; total, $30,400.

Putnam, Otis Street, corner Fourth Street, and 11,900 feet of land. Valuation of land, $8,300; house, $20,000; total, $28,300. An enlargement of this school-house is now building, and the same will be ready for occupancy early in 1890.

Quincy, Mason Street, corner James Street, and 8,469$\frac{3}{10}$ feet of land. Valuation of land, $4,200; house, $10,000; total, $14,200.

Reed, Reed Street, Ward 5, and 12,000 feet of land. Valuation of land, $1,000; building, $3,500; total, $4,500.

Riverside, Putnam Avenue, Ward 1, and 11,198 feet of land. Valuation of land, $2,800; building, $5,000; total, $7,800.

Sargent, Broadway, corner Winsor Street, and 9,995 feet of land. Valuation of land, $4,000; building, $3,000; total, $7,000.

Shepard, North Avenue, near Russell Street, and 14,755 feet of land. Valuation of land, $7,000; building, $20,000; total, $27,000.

Stearns, Harvard Street, near Prospect Street, and 10,050 feet of land. Valuation of land, $5,000; building, $3,000; total, $8,000.

Tarbell, Grigg, Howard, and Magee Streets, and 19,500 feet of land. Valuation of land, $4,000; building, $8,000; total, $12,000.

Thorndike, Thorndike Street, corner Sixth Street, and 10,027 feet of land. Valuation of land, $4,000; building, $30,000; total, $34,000.

Washington, Brattle Street, corner of Farwell Place, and 14,951$\frac{1}{2}$ feet of land. Valuation of land, $7,000; building, $30,000; total, $37,000.

Webster, Upton Street, and 25,839 feet of land. Valuation of land, $9,000; house, $50,000; total, $59,000.

Wellington, Columbia, corner of Lincoln Street, and 18,870 feet of land. Valuation of land, $5,700; building, $16,000; total, $21,700.

Willard, Lake, Lawrence, and Niagara Streets, and 20,079

feet of land. Valuation of land, $5,000; building, $20,000; total, $25,000.

Wyman, Spruce Street, corner Groveland Street, and 14,346$\frac{8}{10}$ feet of land. Valuation of land, $2,400; building, $6,000; total, $8,400.

English High School-house Lot, on Broadway, Trowbridge, and Ellery Streets, containing about 73,350 square feet. (This lot is included among the recent donations of Mr. Frederick H. Rindge. The city is erecting a High School Building thereon.) Valuation not estimated.

Lot of land on Allston and Brookline Streets, purchased for the purpose of building a primary school-house thereon, containing about 25,650 square feet. Valuation, $7,000.

TAX-TITLE ESTATES (SALABLE).

The following described estates were conveyed to the city by persons who had purchased them at auction sales by the Collector of Taxes, and the city has taken legal possession of the same.

Lot on Broadway, west corner of Sixth Street, containing 12,319 feet. Valuation, $5,000.

Lot on Second Street, east of Conlan's Court, containing 26,400 feet. Valuation, $1,300.

Lot on Hunting Street, west side, adjoining land late of Melley, containing 2,709 feet. Valuation, $400.

Lot on Spruce Street, near railroad, adjoining land of McSweeney, containing 4,000 feet; no appraisal.

Land, on Walden Street, southeast of land of Darling, southwest of land formerly of Saunders; area, 16,635 square feet. Valuation, $2,000.

WHARVES AND LANDINGS.

Public Landing, foot of Bath Street; area unknown. *Gerry's Landing*, so called, south of Mount Auburn Street; area unknown. Each has a frontage of 30 feet on the river.

City Wharf, Main Street, opposite Harvard Street, 9,400 feet. Valuation, $7,000.

WATER WORKS PROPERTY.

(These lands were acquired under the various legislative acts in relation to the water supply of the City of Cambridge.)

Kingsley Park, opposite Lexington Avenue, between the Fitchburg Railroad and Fresh Pond, including the old Engine House lot; containing 300,000 square feet.

Tudor Park, between Fresh Pond drive and Watertown Branch Railroad, containing 57,312 feet.

Lands Bordering on Fresh Pond, partly taken and partly acquired by purchase; containing an area of 2,707,308 square feet.

Lands Bordering on Fresh Pond (additional), comprising three estates taken by the Water Board under provisions of Chapter 137, Acts of 1888. The total area of these three estates is about 577,632 square feet, or about 13¼ acres.

Lands Bordering on Little Pond. Area unknown.

New Engine House, opposite foot of Lexington Avenue, and 90,414 feet of land.

Reservoir, Reservoir Street, corner High Street, and 86,920 feet of land. All the Water Works property is in charge of the Cambridge Water Board.

RECAPITULATION OF AREAS.

Kind of Property.	Square feet.	Acres.
Almshouse lands, about	971,642.72	22.306
Cambridge Cemetery (original)	1,778,511.24	40.829
Cambridge Cemetery (enlargement)	1,091,395.8	25.055
Burial Ground, near Harvard Square	85,858	1.97
Occupied by City Buildings	298,853	
City Lands (Salable)	206,589	
City Lands occupied by Sewer Department	23,700	
City Lands occupied by Water Works	33,300	
City Land, occupied by Street Department	130,384	
City Flats	162,379	3.73
Commons and Public Squares	699,015.7	16.047
Occupied by Engine Houses	31,616	
Gravel Pit on Concord Avenue	277,017	6.359
Mill Pond Lands, about	201,467	4.625
Occupied by School-houses	663,106	
Tax-Title Estates, four estates	61,763	
Water Works Lands at Fresh Pond (as far as determined)	3,819,586	87.685
City Wharf, Main Street	9,400	
Total about	10,575,583.46	242.781

SCHEDULE

Of the various salable lands enumerated in this report with their appraisal:

Almshouse Lands (salable) in Somerville, 180,000 feet	$7,200 00
Land on Cambridge Street, 5,000 feet	2,000 00
Land on Porter Street, 3,578 feet	700 00
Land on Portland Street, 18,011 feet	5,500 00
Flats opposite Wharf, Main Street, 162,379 feet	8,000 00
Land, corner of Broadway and Sixth Street, 12,319 feet	5,000 00
Land on Second Street, 26,400 feet	1,300 00
Land on Hunting Street, 2,709 feet	400 00
Land on Walden Street, 16,635 feet	2,000 00
Wharf, Main Street, Lower Port, 9,400 feet	7,000 00
	$39,100 00

The following table gives the estimated valuation of such of the various parcels of city property hereinbefore classified, and having a salable value, as have been appraised by the Assessors. The figures represent the value of the property based upon former estimates, and upon recent sales. A large amount of valuable property, such as commons and public squares, and other lands held for special uses that could not be sold without alienation of title, is necessarily omitted from this schedule.

The valuation of Public Buildings and School-houses is generally based upon cost, though in many instances the appraisal is made at lower figures.

APPRAISAL OF REAL ESTATE.

The following schedule comprises the aggregates of the valuations of each of the various parcels of city property as has been appraised by the Assessors:

Almshouse and Land	$36,000 00
Cambridge Cemetery (cost of land only)	92,400 00
Cambridge Public Library (land only)	29,900 00
City Buildings and Land (Brattle Square, Central Square, City Hall)	159,500 00
City Hall (new) (cost of land only)	94,000 00
City Stables and Land	58,000 00
City Lands (salable)	15,400 00
City Land on Pilgrim Street, and buildings (occupied by Sewer Department)	7,900 00
Amount carried forward,	$493,100 00

Amount braught forward, ...	$493,100 00
City Land on Auburn Street, and buildings (occupied by Water Department)	10,300 00
City Wharf on River Street	12,500 00
City Wharf on Main Street	7,000 00
City Flats, Lower Port	8,000 00
Engine Houses and Land	38,000 00
Gravel Pit (old), Concord Avenue, near Fresh Pond . . .	2,400 00
Mill Pond Lands, Western Avenue	30,700 00
School Houses and Lands	658,700 00
Tax-Title Lands	8,700 00
Total	$1,269,400 00

Respectfully submitted,

DANIEL E. FRASIER,
FRANK H. TEELE,
JOHN S. CLARY,
C. B. SEAGRAVE,

Committee on Public Property.

REPORT

OF THE

SUPERINTENDENT OF PUBLIC BUILDINGS.

OFFICE OF THE SUPERINTENDENT OF PUBLIC BUILDINGS,
CITY HALL, CAMBRIDGE, DEC. 1, 1889.

To the Honorable City Council : —

GENTLEMEN : In accordance with the City Building Ordinance I have the honor to submit my fourth annual report in relation to the construction, repairs, and improvements which have been made during the year ending Nov. 30, 1889, on Public Buildings owned by the city, under the direction of the Committee on Public Property.

The principal expenditures have been as follows :

THE PEABODY SCHOOL HOUSE,

On Linnæan, corner of Avon Street, Ward Five, has been completed at a cost of $25,328.00, including the system of heating and ventilation. The structure is of brick, three stories high, with a frontage on Linnæan Street of 91 feet, and on Avon Street of 33 feet ; containing six rooms with accommodations for three hundred pupils. It was built with the design of adding to its capacity in the future. A plan for the whole structure, as contemplated, has been prepared by the architect for use whenever the City Council decides to complete the work.

PUTNAM SCHOOL HOUSE.

The section of the Putnam School building, erected in the year 1887, on Fourth Street, Ward 3, to meet the pressing necessities existing at that time, is receiving its counterpart as

originally designed. The old brick school house on the lot adjoining has for many years shown marks of weakness in construction; being badly arranged in every way and not suited to the requirements of the times, though occupying one of the most healthful and eligible sites for school purposes in the city. It has been taken down, thus affording the opportunity for the erection of a large and commodious school house, of which the section at first built forms a part.

The completed structure will contain thirteen school rooms, with a seating capacity for six hundred and fifty pupils besides a large hall on its upper floor. The exterior walls are now completed and work on the roof is being pushed as rapidly as the weather allows and the building will be closed in at the earliest period. Particular attention has been given to the sanitary system for this building, also to its heating and ventilation, and when completed, it will rank as one of the finest school buildings in the city. It will probably be finished in the summer of the coming year.

The contract price, including work of taking the old building down, and allowing the use of the old brick, as far as approved, is $38,325.00, which will be paid out of funds especially reserved for the purpose.

In addition to this amount there has been paid to the architect for plans $400, leaving still due to his account $749.75.

The contract price for the heating and ventilation is $4,750.00. These items, added to the amount to be paid on the original contract, make the sum total of $44,224.75, being nearly the amount of the appropriation, which was $45,000.00.

ENGLISH HIGH SCHOOL.

The plans for the new English High School building, now being erected on land donated to the city by Frederick H. Rindge, Esq., for the purpose, on Broadway between Trowbridge and Ellery Streets, have received much study, thought, and time to perfect and bring them up to requirements desired and found necessary.

The Committee on Public Property, aided by a subcommittee of the School board, after employing competent and experienced architects, have had plans under careful consid-

eration for several months, and as a result have adopted the present plans. The contract for the erection and completion of this structure was awarded in September last, for the sum of $170,067.00.

The foundation walls are fast approaching completion, and the first payment, the sum of $3,150.00, has been made. This structure is to be of large dimensions, massive and imposing, with a measurement of 198 feet on its front, and 99 feet deep; three stories high, of stone and amboy brick on its exterior; giving fourteen school rooms with a seating capacity for six hundred pupils. The building will be heated by steam, and will probably be completed in the summer of 1891.

The school houses have received needed attention, seven of them having been painted on the exterior during the year, as follows: — The Dana, Lowell, Riverside, Sargent, Stearns, Tarbell, and Reed, costing $1,259.00.

The coal bins have been enlarged so as to admit hereafter the storage of a full supply of coal for the entire year.

The floating Public Bath house has been painted on its exterior and interior, which, with sundry other repairs and improvements have cost $348.66.

Considerable expense has been incurred in renting, and the fitting up of rooms in different sections of the city, for school purposes, namely: the Institute Hall on Cambridge Street, Ward 3, and the Ward room on Fourth Street. Also, rooms in the Industrial Building, and in the City Building on Brattle Square.

AUSTRALIAN SYSTEM.

The expense attending the preparation for voting under the new system is stated as follows: —

For Compartments, Horses, Tables, etc.	$605 00
For Posts, Rails, and work placing them in position . . .	480 28
Lamps, furnishing, expressing, and sundries	58 32
Making a total of	$1,143 60

SCHOOL HOUSES.

The general condition in which the school houses and other public buildings were found, when the office of Superintendent

of Public Buildings was established, demanded prompt attention, and a large outlay to prevent deterioration, to bring them into a sanitary condition, and make them more convenient and creditable to our city.

With these objects in view, the work has made satisfactory progress from year to year, attention first being given to the most glaring defects.

SANITARY ARRANGEMENTS.

In regard to the sanitary improvements and work in that direction, the Superintendent has availed himself, from time to time, of suggestions from the State Inspector. With conditions as found in some of the school buildings, it has been, as a matter of course, impossible to apply remedies as speedily as sometimes desired. But by taking up first the most urgent cases it is hoped soon to reach the most scrupulous exactions.

Work of such a nature, in some instances, involves a large expenditure. There are often conditions reported to exist, which, after investigation are proved to be not well founded; and a careful scrutiny as to real necessities, before entering into a large expenditure of money, has appeared wise and in the line of good judgment.

It has been deemed important to inquire carefully into causes leading to complaints, in order to intelligently apply proper remedies wherever conditions are found to exist detrimental to health.

With this in view, investigation has been made into the conditions of school houses complained of by the State Inspector; and the Committee on Public Property, with said Inspector, together with the City Health Officer, and the Superintendent of Public Buildings have examined the conditions of each, noting those calling for immediate or prospective improvements, with the intention of meeting all necessary requirements as noted at the time. Changes have been made in the sanitary arrangements of the Gannett School, on Jefferson Street, Ward 2, with satisfactory results. The Allston, Willard, and Shepard also being noted, have received the required attention and remedies have been applied.

The complaints made by the State Inspector, relative to the

sanitary requirements at the Gore School, Ward 3, have received special attention. The arrangements are located in the basement and have been in use for many years. They were constructed before many of the present safety systems and appliances were generally adopted. After investigation by the Committee on Public Property it has been decided that changes should be made by adopting a system tending to purify the air, and conduce more to health and comfort. The matter was submitted to the City Engineer and the Superintendent of Public Buildings, to investigate and propose plans best adapted to meet the requirements; and after careful consideration of the matter, it has been deemed best, with the approval of the State Inspector, to enclose the sanitary arrangements in a brick building, to be erected in the yard, there being ample space therefor, the same to be heated by steam carried by branch pipes from the school house. Plans and specifications for the purpose have been prepared by the City Engineer, and approved by the Committee, and it is recommended that said changes be made.

The approximate estimate of cost is placed at about $2,500; and it has been thought advisable, in view of the cold season, to defer the work until another spring, when an appropriation will be required to meet the expense.

WASHINGTON SCHOOL.

Attention has been called by the State Inspector to the more effectual ventilation of this school house, Ward 1. The cold season naturally prevents any radical movement being made at present; and should changes be determined upon, the matter of cost will come up for consideration later in the year.

The matters and methods pertaining to healthful appliances are of vital interest to all, and due respect should be accorded to the requirements of the State Inspector, all working in harmony with each other, after careful investigation by the city authority, as to the best method of doing, and extent of such work.

NEW SCHOOL HOUSE, WARD FOUR.

The plans which are being designed for a brick school house, to be located on the corner of Allston and Brookline Streets, are in the hands of the architect, and will be completed early in the spring, giving an opportunity to commence the work without undue delay.

PEABODY SCHOOL HOUSE.

The intended inclosure of the Peabody School house by a suitable fence has only been carried out in part. The rear lot has been fenced, leaving the frontage on Linnæan Street and to the rear corner of school house on Avon Street, entirely exposed.

It has been deemed advisable by the Committee that granite curbing be placed around the line of lot at these points, in accordance with plans furnished, and, to meet the cost, I repectfully recommend that an appropriation of $475.00 be made

MASON SCHOOL HOUSE.

Criticism has been made upon the condition of this school building, situated on Front Street near Main Street, standing in a central and commanding position on the wide highway leading to the new Harvard Bridge. The location is more valuable for business purposes, than for its present use.

The old school house is poor, dilapidated, and not worth the cost of such repairs as would be required to put it in good condition. The intention is to abandon this really worn out structure upon the erection and completion of the proposed new school building in Ward 4. Its roof has badly decayed, causing frequent leaks, and repairs have proved ineffectual as a remedy. Yet, in consideration of the short time it will be needed, it is thought best to make repairs to the extent only of actual necessities for the year.

REPAIRS.

The number of finished school houses remains the same as last year, with the exception of the old Putnam, — seventeen constructed of brick and eighteen of wood. Their condition during the year has been greatly improved and many necessities have been met. Besides the care given to plumbing, drainage, heating and ventilation, painting, etc., numerous chimneys have been rebuilt to insure strength and safety. A large number have been whitened and tinted on their interior, yet with all the numerous outlays there are constant calls for additional care and repair and constant expense is required. It will be well for the city to be fairly liberal in its appropriation for this object, in order that our school houses may be a source of just pride to our citizens.

JANITORS.

The care of the City Buildings by the janitors placed in charge requires their constant attention, and forms an important branch of the public service. Their duties are intimately connected with the work of the Superintendent of Public Buildings, and come directly under his observation and incidental direction. It is very important that every janitor should be competent and interested in his work, and that he should evince a disposition to render his best service in the care and protection of the City Buildings. In selecting janitors to take charge of the city property much care and good judgment is necessary to secure persons who are of good character, active, intelligent, and skilful, and who will not indulge in neglect or looseness in the performance of their several duties. This is evidently a matter of first importance. A full discharge of the several duties devolving upon each janitor should be strictly enforced, to ensure the best results in the protection and care of our City Buildings, in keeping them neat and, at all times, attractive in their general appearance, more especially as they are frequently inspected by strangers.

It has been a satisfaction to notice an improvement in the discharge of duties, in some instances, during the year just

closed. The energy displayed by the Committee on Public Property has reformed many a neglect previously complained of, and with increased care and a more faithful discharge of duties, better results may still be attained in the same direction.

THE NATIONAL FLAG.

S. F. Woodbridge, Esq., has donated to the city, during the last month, a national flag to float over the Shepard School on North Avenue. A staff has been erected by the city and the flag has been placed in position.

The offer of James L. Paine, Esq., to provide a flag for the Harvard School, corner of Inman Street and Broadway, has been accepted, and a staff will soon be placed in position for the purpose.

Several other persons have expressed their desire to furnish flags for school houses, to be designated by them, and, in view of the prospect of a general adaptation of the idea of placing flags upon our school buildings, I suggest that an appropriation be made to the amount of $1,500 for their equipment.

This may not be considered a necessity, yet its tendency to encourage in our children more enlarged sentiments of patriotism and greater veneration and regard for our flag, would seem to justify the expenditure of a comparatively small amount of money as wise and proper.

NEW PUBLIC LIBRARY.

The completion, presentation, and acceptance of the new Public Library building, during the year, brings out many expressions of appreciation and gratitude from our citizens.

Its central position, its superb style of architecture, embracing every convenience that experience, genius, and skill could devise, and its enduring stability and grandeur, make it an abiding monument to the donor, and a source of admiration and pride to every citizen of Cambridge.

The grounds about this building have been carefully graded, and artistically arranged for beauty and general effect. The season has favored the planting and growth of trees and shrubbery, so that soon they will add what is wanting to realize the

conception of harmony and fitness in the structure and surroundings, that, in the near future, promises a grand place for quiet resort and study, in which all our people may find satisfaction, improvement, and delight.

The annexed tables will show the amount expended for repairs, alterations, etc., on each building belonging to the city: —

COST OF SCHOOL HOUSE REPAIRS.

High School	$125 26
Latin School	143 66
Allston Grammar	459 98
Corlett Grammar	26 42
Harvard Grammar	190 52
Putnam Grammar	145 34
Shepard Grammar	310 85
Thorndike Grammar	787 69
Washington Grammar	108 52
Webster Grammar	275 91
Wellington Grammar	361 37
Agassiz Primary	54 05
Boardman Primary	173 20
Bridge Primary	14 88
Cushing Primary	244 89
Dana Primary	255 86
Dunster Primary	63 95
Felton Primary	183 46
Gannett Primary (new)	290 65
Gore Primary	202 47
Holmes Primary	192 75
Lassell Primary	67 28
Lowell Primary	324 09
Mason Primary	52 70
Otis Primary	132 66
Quincy Primary	203 21
Reed Primary	185 50
Riverside Primary	303 85
Sargent Primary	322 65
Stearns Primary	243 14
Tarbell Primary	341 52
Willard Primary	101 29
Wyman Primary	161 91
Peabody	60 02
All Schools	314 37
	$7,425 97

MILITARY DEPARTMENT.

The building provided for the purpose of a Shooting Station, on Cushing Street, Ward 1, Belmont District, has received frequent attention in the line of necessary repairs and additions, at a cost, during the year, of $171.84.

ALMSHOUSE.

A wooden building, sufficient for the storage of more than two hundred tons of coal, has been erected at a cost of $266.00, in the City Yard, Norfolk Street, it being a convenient point for distribution of coal to the poor by that department, and was paid for from the Almshouse appropriation.

FIRE DEPARTMENT.

Plans for a bell and hose tower, to be erected on Engine house No. 2, Main Street, are being prepared by the City Engineer, and will require an appropriation, at the proper time, to meet its cost.

The miscellaneous repairs on the several engine houses have been as follows: —

Engine house No. 1, Brattle Square	$10 80
Engine house No. 2, Main Street	79 10
Engine house No. 3, Fourth Street	243 66
Engine house No. 4, North Avenue	217 72
Engine house No. 5, Inman Street	50 36
Chemical, Central Square	91 88
Hook and Ladder No. 1, Brattle Square	72 46
Hook and Ladder No. 2, Portland Street	29 61
	$795 59

POLICE DEPARTMENT.

The amounts expended on Police Stations, for repairs, have been as follows: —

Station No. 1, Brattle Square	$157 63
Station No. 2, Central Square	126 35
Station No. 3, Fourth Street	66 37
Station No. 5, North Avenue	11 10
	$361 45

PUBLIC BUILDINGS.

The rapid progress made during the year in the erection of the new City Hall building, gives the assurance of its entire completion before the close of another year.

The excavation was started in the early part of last March, and the stone laying for the foundation was commenced March 21, since which time the work has been progressing with dispatch and with very satisfactory results.

The first floor was laid in the latter part of April, the ceremonies attending the laying of the corner-stone taking place May 15, the second floor framing going on in the latter part of May, and the third floor early in August. The stone cornice was laid during the first week of September, and, by the middle of that month, the roof framing began to go into place. The work of slating and other finish of the roof have been pushed since then in a very satisfactory manner, so that the building has been for some time under roof.

The work on the tower was stopped at a somewhat earlier date than was, perhaps, necessary ; but as there will be plenty of time to complete this during the spring and summer, it was decided to roof it over for the winter at the point where it now stands, just above the dials of the clock.

In the meantime, throughout the interior, the carpenters have been busy setting partitions, furring, etc., and the electric light men, plumbers, and gas pipers, have been following along with their work. The heating apparatus is being set in place, and it is the intention to get the building plastered this winter, and have ample time to dry out before starting the interior wood finish.

The contract with the builders calls for the building to be completed on or before the first day of September, 1890, and there appears no reason to anticipate any disappointment as to its being then completed.

With this in view, the present City Hall building has received only such attention and outlays as were necessary and desired for the time intervening.

The Ward 1 Building, Brattle Square, has been thoroughly painted and cared for around its upper cornices, towers, and

roof: the slate and tin work have been repaired and placed in good condition. The work on boilers, drainage, and other necessary small repairs, form the extent of work on this building.

The Ward 4 Building, Central Square, has received attention where needed; all of its chimney-tops have been rebuilt, roof made tight, boilers cared for, with numerous improvements and repairs.

The amount expended for repairs has been as follows: —

City Hall	$191 95
Ward 4 Building, Central Square	268 81
Ward 1 Building, Brattle Square	632 32
	$1,093 08

I submit the following estimates of the probable cost for repairs, which it will be necessary to make on the Public Buildings during the ensuing year. As is now apparent, there will be required for ordinary repairs on school houses, the following: —

Latin	$550 00
High	125 00
Allston	255 00
Harvard	180 00
Corlett	90 00
Putnam	75 00
Shepard	437 00
Peabody	70 00
Thorndike	795 00
Webster	633 00
Agassiz	135 00
Boardman	265 00
Bridge	50 00
Cushing	72 00
Dana	105 00
Dunster	85 00
Felton	125 00
Gannett, new	100 00
Gannett, old	60 00
Gore	175 00
Holmes	120 00
Lassell	217 00
Lowell	75 00
Mason	80 00
Otis	355 00
Quincy	218 00
Amount carried forward	$5,447 00

Amount brought forward	$5,447 00
Reed	130 00
Riverside	80 00
Sargent	175 00
Stearns	170 00
Tarbell	183 00
Wellington	136 00
Willard	215 00
Wyman	340 00
Washington	225 00
Total	$7,101 00

On City Buildings there will be required as follows: —

City Hall Building	$200 00
Central Square Building	450 00
Brattle Square Building	650 00
Ward Rooms	100 00
Total	$1,400 00

FIRE DEPARTMENT.

The estimated appropriation to meet the necessary repairs and improvements, for the ensuing year, is as follows: —

Engine house No. 1	$85 00
Chemical No. 1	90 00
Engine house No. 2	130 00
Engine house No. 3	105 00
Engine house No. 4	167 00
Engine house No. 5	107 00
Hook and Ladder No. 2	188 00
Total	$872 00

POLICE DEPARTMENT.

Station No. 1, Brattle Square	$75 00
Station No. 2, Central Square	75 00
Station No. 3, Fourth Street	100 00
Station No. 5, North Avenue	167 00
Total	$417 00

An appropriation for repairs, etc., on the Public Bath House, will be required, for the year, to the amount of $200.00, and for the Shooting Range, $150.00.

The estimates for the repairs and improvements on the City Buildings amount, in the aggregate, to $3,039.00.

The estimates for school house repairs and improvements amount to $7,101.00; Flag equipment, $1,500.00 $8,601.00

Peabody School granite curbing 475.00

Total $9,076.00

These estimates are based upon the obvious necessities in each case, and it is hoped, by judicious care, that the amount will be sufficient.

Respectfully submitted,

BENJ. H. STEELE,

Superintendent of Public Buildings.

REPORT

OF THE

INSPECTOR OF BUILDINGS.

Office of the Inspector of Buildings, City Hall,
Cambridge, Dec. 1, 1889.

To the Honorable the City Council :—

Gentlemen: As required by the City Building Ordinance I have the honor to submit my fourth annual report in relation to the business of this department for the year ending Nov. 30, 1889.

The unabated activity in building operations during the year, an outcome of our increased growth in wealth, population, and business enterprise is a matter of local pride, and of general interest. By reference to the annexed tables it will be seen that there have been granted during the year, 559 permits for buildings, repairs and alterations. The requirements of the building ordinance have received general compliance, with few exceptions. Permits have been issued to builders when applied for; an increased regard is constantly being shown towards the ordinance, and but few instances have come to my notice of attempted evasion of its requirements.

The advantage to cities of increasing growth, by requiring permits for building and alterations, is notably seen in the facts, that dangerous conditions are often exposed which might, if left unnoticed, lead to public calamity in the event of fire. Looseness and carelessness in building are, to a great extent, detected and remedied, a higher standard and a general regard for safety are secured. The inspector has knowledge of all work going on in the city, and an opportunity is afforded for his inspection and approval. It gives to the assessors addi-

tional opportunity to obtain desirable information as to locality and extent of building and repairs, and it fixes a personal responsibility upon each builder for a proper performance of work, as set forth in the building ordinance.

Our buildings are constructed mostly of wood; and increased care given while building is of the greatest importance. The application of fire checks, as now required in all dwelling-houses, has the advantage of confining fire to the apartment in which it occurs, and has generally found a ready compliance, giving increased assurance of security where danger formerly existed.

The requirements for foundations have been generally complied with; and, in instances of attempted violation, prompt compliance with instructions from the Superintendent have been accorded.

The work of this office embraces inspection of buildings said to be in any condition of danger, of chimneys not secure, and the application of proper remedies where danger appears to exist. It is gratifying to be able to report, that in all cases where requirements under the ordinance have been made, a prompt and willing compliance has been accorded, and necessary alterations made by the owners, without, in any case, obliging the Inspector to resort to extreme measures.

The fifty-second section of the Building Ordinance has been amended during the year, so that no appeal can hereafter come before the Board of Aldermen asking permission to project bay windows over the line of the highway, the prohibition, as now existing, being positive. An amendment has also been made to section nineteen, allowing the external walls of all brick buildings, other than dwellings, to be forty feet high, with a thickness of sixteen inches, instead of thirty-five feet high, as formerly limited.

This increase of height will have a tendency to encourage the erection of a more imposing class of buildings, and furnish an opportunity for architectural effect.

The tables annexed will show the number and character of the alterations, where the services of the Inspector of Buildings have been required in relation to public safety.

Buildings in a dangerous condition	29
Dangerous chimneys	26
Wood work too near flues	53
Weak foundations	6
Violation of ordinance	12
Fire checks ordered	8
Notices to the State inspector for fire escapes	32
Whole number	166

TABLE SHOWING THE NUMBER OF PERMITS GRANTED IN EACH WARD FOR BUILDINGS, ETC., AND THE PURPOSE OF THE SAME.

	Wd. 1.	Wd. 2.	Wd. 3.	Wd. 4.	Wd. 5.	Total.
Dwelling-houses in blocks	7	11	10	9	5	42
Single dwelling-houses	44	45	17	37	62	205
Addition to houses	21	17	16	28	12	94
City Hall		1				1
Storage	6	4	5	15	7	37
Stables	7	8	7	12	8	42
Cellar walls	8	10	2	8	8	36
Stores	3	2	2	5	4	16
Factories	2	10	2	2	1	17
Alterations to buildings	4	9	3	8	2	26
Carriage houses	4	1		1		6
Offices	3	1	1	3		8
School houses	2		1			3
Churches				1		1
Addition to churches	1	1		1		3
Shops	1	3	1	4	2	11
Literary purposes	4					4
Steam boilers		3	1	3		7
Total						559

Of the above permits, 476 were for wooden buildings, 27 for brick or stone buildings, and 56 for sundry purposes; making a total of 559. Those built of brick or stone are divided as follows: —

Church	1
Addition to churches	2
Factories	5
Offices	2
Stores and dwellings	11
Storage	3
School houses	2
City Hall	1
	27

Number of permits granted for each month; —

	1889.	1888.
December	27	40
January	33	10
February	27	20
March	59	46
April	72	78
May	53	64
June	46	60
July	51	52
August	46	55
September	54	41
October	48	43
November	43	44
Total	559	553

While these statistics of building operations show that there has been no notable increase in the number of buildings, it is gratifying to note that the style and character of the buildings erected, have been generally substantial and creditable to our city.

Respectfully submitted,

BENJ. H. STEELE,
Inspector of Buildings.

REPORT

OF THE

COMMITTEE ON SOLDIERS' AID.

THE Committee on Soldiers' Aid submits to the City Council its report for the year ending Nov. 30, 1889: —

The amount paid as regular State aid was	$9,092 25
The amount paid to indigent soldiers and sailors was	2,919 00
The amount paid to soldiers and sailors, and widows of soldiers and sailors, under Chap. 298, Acts of 1889, since May 3, 1889, was	1,033 93
The amount paid to the agent employed in the examination of settlements, etc., was	540 00
Expenses of clerk (car fare)	50
Total	$13,585 68

The amount received from the Commonwealth was	$9,993 50
The amount received from other towns and cities	72 00
	$10,065 50

There are now upon the State-aid list 199 persons, and upon the list of indigent soldiers and sailors 37. The number of persons aided under Chap. 298, since May 3, 1889, was 30.

All of which is respectfully submitted,

JOHN H. CORCORAN,
JOHN E. PARRY,
FRANK H. TEELE,
WM. T. NEILON,
ALEX. MILLAN,

Committee on Soldiers' Aid.

REPORT

OF THE BOARD OF

CEMETERY COMMISSIONERS.

To the Honorable the City Council of the City of Cambridge: —

THE Board of Commissioners of the Cambridge Cemetery respectfully submits its thirty-sixth annual report, the same being for the year ending Nov. 30, 1889.

The amount appropriated at the beginning of the year was as follows: —

Current Expenses	$14,000 00
Old Burial-Ground, Ward 1	300 00

By a general order of the City Council, approved Sept. 11, 1889, the excess of revenue, in all departments, over the estimated amounts, was credited to the appropriation. On this account the Cemetery appropriation, at the end of the financial year, was increased in the sum of $3,207.26, making the total appropriation as follows: —

Current Expenses	$17,207 26
Old Burial-Ground, Ward 1	300 00
Total	$17,507 26
The total amount of expenditure was	16,288 17
This leaves an unexpended total balance of	$1,219 09

For a detailed account of expenditures, reference is made to the Auditor's report.

The receipts for the year have been as follows: —

Burial and tomb fees	$4,170 13
Care of Lots	3,988 72
Lots and Graves	7,027 35
Foundations, Brick Graves, etc.	833 58
Sundries	516 48
Interest on Cemetery Fund	671 00
	$17,207 26
The estimated revenue was	$14,000 00
The actual revenue was	17,207 26
Excess of revenue over estimate	$3,207 26
Number of lots prepared this year	59
Estimated value of same	$12,170 00
Number of lots graded (not finished)	46
Estimated value of same	$14,674 00
Number of lots now ready for sale, old part, 63; new part, 78	141
Estimated value of same	$36,982 10
Single graves ready for sale	35
Estimated value of same	$7. 0 00
Amount received for perpetual care in 1889	$2,214 50
Number of lots under perpetual care	142
Amount of fund for perpetual care of lots	$16,247 59
Interest on fund for perpetual care of lots	$473 86
Number of interments this year	624
Total number of interments in cemetery	16,602

The continuous rainy weather has made the labor of keeping the avenues and paths in proper condition very severe, the grass alone, from its rapid growth, requiring constant attention from April until October, — an unusually long period.

Avenues and paths are all in good condition. Several new ones have been opened and graded, and the drainage system extended to meet the demands of the new ranges, which have been laid out.

The fence on the east side of River Avenue, one thousand feet in length, has been finished, thus completing a much-needed improvement, and rendering this roadway safe and convenient for travel.

The new receiving tomb was completed, and the approaches graded, during the latter part of the year 1888. The first body was placed in it on Dec. 29, 1888.

The old tomb has been entirely renovated, and is ready for use, when required.

The By-Laws and Regulations, pertaining to the Cemetery, have been revised, and three thousand copies of these, with names of lot owners, have been prepared and printed, and are now ready for distribution to owners of lots in the Cemetery.

The gate and fence, at the entrance of the Cemetery, are fast becoming decayed, and should be replaced, at an early day, by some structure more in keeping with the surroundings.

The old burial ground, on Garden Street, has been carefully attended to, and the growth of shade trees will soon shut out from view the unsightly buildings in the rear.

The fence surrounding this old burial place is in a very dilapidated condition, and should be replaced, as the repairs on the present fence are expensive and continuous.

In order to facilitate work at the Cemetery, and increase the efficiency of the laboring force, the office of Assistant Superintendent was established, and the results have shown the wisdom of the change.

SOLDIERS' LOT.

We would call attention to the following brief statistics concerning this lot.

Since 1879, the following amounts have been expended : —

Headstones	$1,731 75
Foundations	307 50
Expenses of Burials	164 00
	$2,203 25

There have been interred, to the present time, the bodies of ninety-one honorably discharged soldiers and sailors. The care and attention necessary to fittingly preserve this portion of the Cemetery have been freely given by the Cemetery Commissioners. Headstones have been furnished to mark every grave, and no effort has been spared to make this spot, associated so intimately with feelings of patriotism and valor worthy of being the final resting place of those who gave their lives that our country might live.

During the year, the Board of Cemetery Commissioners has sustained a severe loss in the death of Commissioner Charles E. Raymond, who departed this life Sept. 17, 1889. This Board has already formally acknowledged its loss, and the public loss, in his demise, but again refers to it with feelings of sorrow, and deeply regrets the sudden termination of a career which afforded such an inspiriting example of public integrity and usefulness.

HENRY H. GILMORE,
JOHN F. O'BRIEN,
LEANDER GREELY,
GEO. S. SAUNDERS,
WM. A. BERTSCH,
SILAS B. BUCK,
DAVID ELLIS.

REPORT

OF THE

CITY ENGINEER.

City of Cambridge,
Office of the City Engineer, Dec. 1, 1889.

To the Honorable City Council: —

The City Engineer has the honor to submit herewith the twenty-third Annual Report of the operations of the Departments of Engineering and Sewers, for the year ending Nov. 30, 1889.

OFFICE.

On the 24th day of February, 1889, Mr. William S. Barbour, since 1876 the City Engineer of Cambridge, passed away. Having been intimately associated with him in the work of the department, and always maintaining the pleasantest relations during these thirteen years, I desire to express here my deep sense of personal loss in his death, and to record the high regard and esteem in which he was held, both as a gentleman and as an engineer.

Always courteous, singularly conscientious in his dealings with men, he possessed that practical experience and sound judgment as an engineer, that made his opinion valuable, and his work eminently successful.

There have been employed in the office during the year nine persons, six permanently, and three during the summer. All have performed their duties with intelligence and fidelity.

The calls upon the office for plans, information, and advice

by the various departments, committees, and the public have been incessant.

Something of the outside work performed during the year, will be shown by the following

STATEMENT.

On application of the Street Department.

Number of street lines given	65
Number of street grades given	40
Number of cars measured (cracked stone)	324
Number of streets on which paving, curb, etc., was measured	65

On application of private parties.

Number of street lines given	288
Number of grades given	193

MISCELLANEOUS.

Number of houses measured	656
Number of plans or profiles prepared for sewers	40
Number of plans or profiles prepared for streets	96
Number of surveys at cemetery	13
Number of miscellaneous surveys, profiles, and levels made	260

The time of one assistant has been largely taken with the accounts and payrolls of the Sewer Department.

The appropriation for engineering was	$9,000.00
Revenue	91.00
Total	$9,091.00
Expended	8,651.48
Balance	$439.52

BRIDGES.

The following is a list and description of the bridges within the city limits:

BOYLSTON STREET (OR "CAMBRIDGE GREAT BRIDGE").

Over Charles River, from Boylston Street, Cambridge, to North Harvard Street, Brighton.

Wooden pile bridge, originally built in 1662; width of draw, 31 ft. 8 in. This bridge is in fairly good condition.

This is one of the four bridges referred to in the Act of the Legislature, approved April 18, 1888, by which the draw or water way was to be made to have a clear opening of 36 feet.

BROOKLINE BRIDGE.

Over Charles River, from Brookline Street, Cambridge, to Essex Street, Boston.

Wooden pile bridge, built in 1850. Width of draw, 31 ft. 2 in. The bridge is in very good condition.

This bridge was also included in the Act of 1888, referred to above.

CRAIGIE BRIDGE.

Over Charles River, from Bridge Street, Cambridge, to Leverett Street, Boston.

Wooden pile bridge, originally built in 1808; width of draw, 35 ft. 10 in. Kept in repair by two Commissioners, one appointed by each city.

FRESH POND LANE BRIDGE.

Over Watertown branch of the Fitchburg Railroad, at Fresh Pond Lane; wooden bridge, built in 1848, by the Fitchburg Railroad Company, and is maintained by this company.

HARVARD BRIDGE.

Over Charles River, from Front Street extension, Cambridge, to West Chester Park, Boston. Iron bridge, on stone piers, will be completed this year; width of draw, 36 feet.

MOUNT AUBURN STREET BRIDGE.

Over Watertown Branch of the Fitchburg Railroad at Mount Auburn Street; wooden bridge, built by Fitchburg Railroad Company in 1848, and maintained by this company.

NORTH AVENUE BRIDGE.

Over the Fitchburg Railroad at North Avenue; wooden bridge, built by Fitchburg Railroad Company in 1839, and maintained by this company.

This bridge is now being rebuilt.

PRISON POINT BRIDGE.

Over Millers' River, from Prison Point Street, Cambridge, to Austin Street, Boston; built in 1815. In charge of Commissioners.

Wooden pile bridge; width of draw, 35 ft. 6 in.

RIVER STREET BRIDGE.

Over Charles River, from River Street, Cambridge, to Cambridge Street, Allston. A wooden pile bridge, built in 1810; width of draw, 30 ft. 11 in.

This bridge is now in an unsafe condition (see Annual Report for 1888, and communication to Board of Aldermen, May 21, 1889); the draw of this bridge is required to be widened, by the Act of Legislature referred to above.

SIXTH STREET BRIDGE.

Over Broad Canal, at Sixth Street. Wooden pile bridge, built in 1873; width of draw, 32 ft. 6 in. This bridge is now under contract with John P. Perkins & Son to be rebuilt.

THIRD STREET BRIDGE.

Over Broad Canal, at Third Street. Wooden pile bridge; width of draw, 32 feet.

Bridge in good condition.

WALDEN STREET BRIDGE.

Over the Fitchburg Railroad, at Walden Street. Wooden truss bridge, built by the Fitchburg Railroad Company in 1854, and, until 1875, maintained by the Railroad Company; since 1875, maintained by the city; now in fairly good condition.

WEST BOSTON BRIDGE.

Over Charles River, from Main Street, Cambridge, to Cambridge Street, Boston; wooden pile bridge, built in 1793; width of draw, 36 feet. In charge of Commissioners.

WESTERN AVENUE BRIDGE.

Over Charles River, from Western Avenue, Cambridge, to Western Avenue in Boston; wooden pile bridge, built in 1810; width of draw, 31 ft. 2 in. This draw is also one of those included in the Act of 1888, requiring a widening to 36 feet. The bridge is now in fair condition, except the draw, which needs some slight repairs.

STREETS.

The streets laid out and accepted during the year are shown in the following table.

Street.						Plan.	
Name.	From	To	Length in feet.	Width in feet.	Accepted.	Made by	Date.
Albany Street	Osborn Street	Front Street (Ext'n)	118.20	50	July 25, 1889	City Engineer	June 24, 1889.
Avon Hill Street	Lambert Avenue	Bellevue Avenue	171.57	40	Nov. 14, 1889	W. B.Cabot	Sept. 9, 1889.
Bellevue Avenue	Raymond Street	Easterly	495.00	30	Nov. 29, 1889	W. A. Mason & Son	May 1, 1885.
Charles Street	Fifth Street	Sixth Street	400.00	50	Nov. 29, 1889	City Engineer	Oct. 21, 1889.
Clifton Street	Spruce Street	Dudley Street	720.57	40	Oct. 9, 1889	W. A. Mason & Son	May 21, 1889.
Donnell Street	Concord Avenue	Garden Street	684.19	30	May 24, 1889	W. A. Mason & Son	July 8, 1884.
Irving Street	Kirkland Street	Everett Street	775.94	40	Nov. 29, 1889	W. A. Mason & Son	Oct. 20, 1889.
Lambert Avenue	Near Mt. Pleasant St.	Raymond Street	548.34	50	Nov. 14, 1889	W. B. Cabot	Sept. 9, 1889.
Union Street	Lincoln Street	Hampshire Street	646.02	30	May 16, 1889	W. A. Mason & Son	July 13, 1887.
Vincent Street	Walden Street	Lambert Avenue	357.67	40	Nov. 14, 1889	W. B. Cabot	Sept. 9, 1889.
Whittier Street	Walden Street	Lambert Avenue	362.12	40	Nov. 14, 1889	W. B. Cabot	Sept. 9, 1889.
Windsor Street	State Street	Front Street (Ext'n)	390.49	40	Oct. 30, 1889	City Engineer	June 21, 1889.

Brattle Street has been widened 10 feet on its southerly side, from Elmwood Avenue to its junction with Mount Auburn Street, thus making Brattle Street a uniform width of 60 feet throughout its entire length, from Harvard Square to Mount Auburn Street.

Windsor Street has been extended, 40 feet wide, from State Street to Front Street extension.

Small areas of land have also been taken at the junction of Front Street and Main Street, Front and State Streets, Hampshire and Cambridge Streets, and Soden and Franklin Streets, changing the junction of the street lines, at these points, from acute angles to easy curves.

The sea wall on the wharf lot owned by the city, on River Street, has been completed at a total cost of $5,518.60.

The city now has a fine wharf lot, containing 90,784 square feet, with frontages on Blackstone and River Streets and the Charles River.

A much-needed improvement has been made in paving, with granite blocks on a cracked stone foundation, the portion of Broadway between Third Street and the Boston & Albany Branch Railroad.

As the West End Street Railway were relaying their tracks in North Avenue and Main Street, the opportunity was taken to place them at a higher grade, giving more "crown" to the street, and insuring better surface drainage, an important element in the problem of keeping any pavement in good condition.

The extension of Front Street, referred to in the last Annual Report, has been filled, from the junction with Main Street to the Boston and Albany Branch Railroad, to grade 21.00 by material obtained from the railroad.

Thirty-seven thousand one hundred and fifty-four cubic yards of filling were placed, at an expense of $21,177.78.

The portion of the street between the railroad and the Harvard Bridge has been filled by the Charles River Embankment Co., to about the same grade.

The expected early opening of the Harvard Bridge will present the matter of the manner of crossing the railroad, and the method of paving the roadway, for early settlement.

SEWERS.

There have been built during the year $2\frac{821}{1000}$ miles of sewers, making the total length of sewers in the city, $83\frac{791}{1000}$ miles.

Twenty-one persons have been licensed as drain layers, to whom have been granted a total of 496 permits, for making repairs and connections on private drains.

BATH STREET SEWER SYSTEM.

This system, begun in 1887, was completed this season. It now extends from its outlet in Charles River to a point in Linnæan Street, near Potter Park, a total length of 6,493.3 feet. The entire cost has been $32,071.60.

BELMONT SEWER SYSTEM.

This sewer has at last reached the district for which it was mainly designed, and is now carried to the crossing of private lands between Holworthy and Cushing Streets. Holworthy Street has been sewered its entire length, and the remainder of the district should be provided for the coming season.

In the deep cuts made on Holworthy Street, and across the private lands, the Clarkson hoisting machine, in use by the Sewer Department, has again demonstrated its capability to handle material in an economical manner. The cost of excavating, bracing, and refilling trenches from 12 feet to 22 feet in depth, has been but 32 cents per cubic yard.

BINNEY STREET SEWER.

The wooden piling which held the earth covering over the sewer east of Third Street having become decayed, a contract was made with Mr. John T. Scully to reinforce it with new piling on one side, and filling on the other. The cost of this work was $2,852.80.

BRIDGE STREET SEWER OUTLET.

The usual dredging has been done at the outlet this year. The material was forced from under the bridge and wharves by a powerful water jet, and then placed by a dredge in scows, and carried to the outer harbor.

The dredging was performed by Boynton Bros., for 65 cents per cubic yard.

Three thousand four hundred and seventy-six cubic yards of material was removed, at a total cost of $2,620.55, five-ninths of which has been paid by the city of Somerville.

METROPOLITAN SEWERAGE SYSTEM.

The State Board of Health, in January, 1889, made a report on a Metropolitan Sewerage system for the Mystic and Charles River valleys to the General Court. This report was adopted, and a bill carrying out the recommendations of the report was passed by the Legislature, and approved by the Governor, June 7, 1889.

Under this act three Commissioners, Messrs. Kingman, Haynes, and Davis, have been appointed by the Governor, who are to have in charge the carrying out of the work "in substantial accordance with the plans reported and recommended by the State Board of Health."

Plans in detail are now being prepared, and it is expected that the work of construction will be begun the coming season.

The importance of the matter of sewage disposal for the district covered by this bill, in its bearing on the public health and welfare, can hardly be overestimated, and it is certainly a cause for congratulation that this important and much discussed question is in the way of such speedy and satisfactory settlement.

APPROPRIATION AND EXPENDITURES.

CONSTRUCTION (BATH STREET SEWER SYSTEM).

Appropriation		$15,160.58
Transferred to "Belmont Sewer System"	$1,148.13	
Transferred to Sundry Sewers Construction	4,143.50	
Expended	9,868.95	
		$15,160.58

CONSTRUCTION (BELMONT SEWER SYSTEM).

Appropriation	$2,005.25	
Transferred from "Front and Albany Street Sewer"	885.10	
Transferred from "Bath Street Sewer System"	1,148.13	
		$4,038.48
Expended to Dec. 1, 1889		4,038.48

CONSTRUCTION (FRONT AND ALBANY STREET SEWER).

Appropriation	$5,000.00
Transferred to Belmont Sewer System	885.10
Balance	$4,114.90
Expended	4,114.90

CONSTRUCTION (SUNDRY SEWERS).

Appropriation	$25,000.00
Transferred from "Bath Street System"	4,143.50
	$29,143.50
Expended	29,138.70
Balance	$4.80

MAINTENANCE.

Appropriation	$20,101.85
Expended	19,533.96
Balance	$567.89

The construction and cost of the sewers built are shown in detail in the following table.

SEWERS CONSTRUCTED BETWEEN DEC. 1, 1888, AND DEC. 1, 1889.

Location.			Construction.								
Street.	From	To	Built by	Material.	Size in inches.	Av. depth of cut.	Man-holes.	Lamp holes.	Inlet	Length in feet.	Total Cost.
† Albany (See Front St.)	End of old sewer.	Front St.	City Engineer.	Brick	24x30	3.9	2		16	223.7	
Appleton	Vassal Lane	Southerly	" "	Akron pipe	12 and 10	9.2	1		44	590.1	$ 657 78
Auburn Place	Belm'nt Dis. Sewer	Northerly	" "	Portland pipe	10	5.5	1		16	225.2	237 78
Auburn	End of old sewer.	Westerly to near River St.	" "	Akron pipe	8	5.4		1	5	39.6	30 62
* Belmont District Sewer	Auburn Place	Cushing St.	" "	Brick	24x36 and 24x30 30x38½ and 27x35						
Blackstone	Western Av.	Albro St.	" "	Akron pipe	15	13.5	1		28	370.3	930 47
Blackstone	Albro St.	Southerly	" "	Portland pipe	12	10.3	1		30	376.7	584 29
† Blanche	Front St.	South of Auburn St.	" "	Akron pipe	12 and 10	5.2	3		51	788.0	1,024 48
Brookford	North Av.	Westerly	" "	" "	12	2.7	1		26	403.1	311 12
Carver	Hammond	Northerly	" "	" "	10	4.0		1	13	147.3	105 32
Cedar	End of old sewer.	Near Rice St.	" "	" "	10	6.9			4	51.5	40 56
Charles	Sixth St.	Westerly	" "	" "	10	7.0		1	17	177.9	148 81
Concord Av.	Bond St.	Northwesterly	" "	" "	10	13.9		1	29	324.6	540 55
Concord Av.	End of old sewer.	Northwesterly to near Sparks St.	" "	Portland pipe	8	6.5			2	37.0	51 21
Cottage Court	Cottage St.	Southwesterly	" "	Akron pipe	10 and 8	8.1		1	13	141.4	108 87
Dyke	End of old sewer.	Westerly	" "	" "	10	7.6	1		8	86.5	170 60
Fiske Av.	Washington St.	Southerly	" "	" "	10	4.9		1	14	200.1	141 80
Fourth	Cambridge	Southerly	" "	" "	10	9.4	1	1	10	144.2	234 18
† Front	Sidney St.	Albany St.	" "	Portland & Akron pipe	18, 15, and 10	5.0	5		90	1260.3	‡ 4,650 74
Grant	End of old sewer.	Near DeWolf St.	" "	Akron pipe	10	8.8	1		9	92.7	139 11
Hancock	Harvard St.	Near Chatham St.	" "	" "	10	9.0	1	1	16	228.1	363 49
Holworthy Place (See Belm't Dis. Sewer)											
Holworthy	Near Holw'y Place	North of Locust St	" "	Portland & Akron pipe	18 and 15	11.7	3		61	834.5	2,171 23
Holworthy	Holworthy Place.	Near Belmont St.	" "	Akron pipe	12 and 10	9.0	1	1	41	520.8	584 33

* In process of construction.

† Pile foundation.

‡ Includes cost of Albany St. Sewer.

SEWERS CONSTRUCTED BETWEEN DEC. 1, 1888, AND DEC. 1, 1889.— *Continued.*

Location.			Construction.								Total cost.
Street.	From	To	Built by	Material.	Size in inches.	Av. depth of cut.	Manholes.	Lamp poles.	Inlets	Length in feet.	
Houghton	Prospect St.	Westerly	City Engineer.	Akron pipe.	10	3.8	1	1	1	73.3	92 33
Howland	Hammond St.	Westerly	" "	" "	10	6.7	1	1	19	246.3	209 97
Hudson St. and Place	Wright St.	Southwesterly and Northwesterly	" "	Akron pipe	10	8.3	1	1	12	199.0	244 45
Irving Place	Sumner St.	Near Irving St.	" "	" "	10	9.0	1		22	292.5	296 65
Irving	Kirkland St.	Northerly	" "	Brick	24x31 16x25½	8.8	2		58	799.0	†2,983 89
Lambert	Cambridge St.	Gore St.	" "	Akron pipe	18	10.6	2		43	432.3	1,121 20
Oxford	Forest St.	Near Somerville line	" "	" "	10	9.4	1		16	241.5	289 72
Prince	End of old sewer	Near Pleasant St.	" "	" "	10	8.9	1		14	171.6	174 65
Putnam Av.	End of old sewer	Westerly to Brookline St.	" "	Akron pipe	10	8.5		1	6	96.4	103 45
Regent St. and private lands	Creighton St.	Near North Av.	" "	" "	12 and 10	7.5	2	1	49	714.3	951 29
Rice	Spruce St.	North Av.	" "	" "	15, 12, and 10	10.4	3		80	1,110.0	1,350 24
‡River	Putnam Av.	Fairmont St.	" "	" "	12 and 10	7.6	1	1	27	335.4	750 73
Second	Thorndike St.	Near Otis St.	" "	Portland pipe	10	8.8	1		14	186.4	206 20
‡Second	Charles St.	Southerly	" "	Akron pipe	12	7.7	1		16	250.6	471 80
Second	End of old sewer	Southerly to near Cambridge St	" "	Akron pipe	10	7.6		1	4	35.2	46 71
Scott (see Irving St.)	Irving St.	Northeasterly	" "	Brick	16x20½	6.5	2		41	633.9	
Sumner	Cambridge St.	Near Kirkland St.	" "	Akron pipe	15 and 10	10.3	2		40	528.5	840 33
Walden	Crescent St.	Near Fitchburg R. R.	" "	" "	10	12.4		1	10	125.3	189 85
*Walker	Shepard St.	Linnæan St.	" "	Brick	25½x33	7.6	3		64	859.2	
West Bellevue Av.	Raymond St.	Westerly	" "	Akron pipe	10	7.7		1	15	199.1	246 97
Windsor	End of old sewer	Northerly to near Hampshire	" "	Akron pipe	10	6.7	1		10	101.7	113 11
							49	18	1104	14,895.1	$23,910 88

* Part of Bath St. Sewer System.

‡ Pile foundation.

† Includes cost of Scott St. Sewer.

SEWERS RECONSTRUCTED BETWEEN DEC. 1, 1888, AND DEC. 1, 1889.

Location.			Construction.								Total cost.
Street.	From	To	Built by	Material.	Size in inches.	Av. depth of cut.	Man-holes.	Lamp holes.	In-lets	Length in feet.	
Concord Av.	Garden St.	Near Craigie St.	City Engineer.	Cement & Akron pipe.	12 and 10	9.9	1		19	625.3	$ 529 33
Fifth	Charles St.	Vine St.	" "	Akron pipe.	15	11.1	1		20	264.1	†1,207 00
*Garden	Wallace St.	Shepard St.	" "	Brick.	43x33	10.9	1		15	166.8	
Gore	Sixth St.	Somerville line	" "	Akron pipe.	18, 15, and 12	9.5	3		64	737.1	1,491 02
*Linnæan	Raymond St.	Potter Park	" "			10.0	3		97	1393.3	
*Shepard	Garden St.	Walker St.	" "	Brick.	29x37	8.9	2		54	656.3	
Vine (See Fifth St. Sewer)	Fifth St.	Fourth St.	" "	Akron pipe.	12	9.8	1		31	374.9	

* Part of Bath St. Sewer System.

† Includes cost of Vine St. Sewer.

In June of this year, the office of Superintendent of Sewers having been established, Mr. T. L. Pike, since 1880 connected with the Sewer Department, was elected as Superintendent.

Mr. Pike is a gentleman of large experience in sewer construction, and it is to his careful and intelligent supervision, that the efficiency of the Sewer Department is largely due. His report is appended herewith.

CITY HALL, CAMBRIDGE, Dec. 1, 1889.

L. M. Hastings, City Engineer: —

SIR: The sewers are generally in good condition. Some of the older ones are not working just right, and will have to be rebuilt at an early day.

There are more of the cement pipe sewers that are liable to give out any time. Some of them will have to be relaid the coming year.

The Murray Street sewer was examined early in the year, and found to be very much out of order; it was repaired to some extent, but it is in such condition that it will have to be rebuilt.

The outlet of the Charles River Street sewer needs some repairs, which can be done during the winter.

CLEANING SEWERS.

The usual amount of cleaning has been done in the smaller sewers, and more flushing than ever before in one year.

There is some difficulty in flushing in some localities, on account of hydrants being so far from man-holes; more hose will be required for this purpose the coming year.

This is the best and most inexpensive method for keeping the sewers in good working condition that we know of, and we can hardly do too much of it.

The cleaning of the larger sewers will be attended to during the winter.

CATCH BASINS.

There have been 42 new catch basins built, and 88 old ones have been repaired, during the year. There are quite a number of new catch basins called for at present; many of the old ones have had new patent traps set, which saves refilling after being cleaned.

The cost of cleaning is increasing every year on account of the increased number of basins and other causes; 4,145 single loads have been taken from 1,363 catch basins.

The work has been carried on the entire year, when the weather was suitable.

SEWER YARD.

We have at the yard about 2,000 ft. of pipe and fittings, varying in size from 18 in. to 6 in. in diameter, 33 North River stones, 8 curb stones, 8 gutter stones, 10 patent traps, 12 solid iron covers for catch basins, and full equipment of all tools used in the department, also 2 horses, 1 open wagon, 1 top buggy, and 2 sets of harness.

There is a building, formerly used for a stable and tool house, that could be altered into a dwelling-house for the yard man, with little expense; it was recommended by our late City Engineer, in his last Annual Report, and I think it very desirable to have some one about the premises all the time, more especially as a contract has just been closed for a large amount of drain pipe, which will be liable to breakage by boys, if not cared for.

Alewife Brook has had the usual yearly cleaning, and is in as good condition as can be under the circumstances; there will have to be some important changes made to provide for the surface flow of water very soon.

LABOR.

There have been between eighty and ninety men employed during the year, all of whom are registered at the Civil Service Labor Office.

I think the men, as a rule, feel differently about civil service than when it was adopted at the beginning of the year; they understand it better and dislike it less.

T. L. PIKE,
Superintendent of Sewers.

WATER WORKS.

The work of improvement around the borders of Fresh Pond has been carried on under the direction of the Superintendent.

The wet season, while it has kept the vegetation about the pond in an excellent condition, has also kept the water in the nooks adjoining the pond on the west side, and on the Fresh Pond meadows, at an unusually high stage.

It has been proposed to connect the nooks with an outlet into the open meadows, north of Concord Avenue, but unless the water on these meadows is lowered, it would have but little practical value. This can probably be accomplished by deepening and enlarging the channel or water way of Alewife Brook; involving a considerable expense, and possibly legislation. The matter should receive careful consideration.

RESERVOIR.

The north and part of the west retaining wall of the Reservoir having become badly broken by frost, and showing serious movement with some small leak in portions of the easterly bank, it became necessary to do something to put the Reservoir in safe condition, and the Engineer was instructed to prepare plans and estimates for removing the old walls, and replacing them with walls of a better quality of masonry.

Various plans were prepared, and estimates of cost submitted; but owing to the necessarily large cost of the work, and the uncertainty as to the permanent maintenance of the Reservoir on its present site, it was finally decided, as a temporary measure, to enclose the weaker portions of the Reservoir with a continuous line of spruce sheet piling, 4 in. thick, tongued and grooved, and driven so as to make it tight as possible.

Numerous borings showed the portions of the embankment, and the natural soil underneath to be a fine compact sand, a material illy suited for a reservoir embankment, and, at the same time, making the hardest kind of driving for sheet piling.

It was intended to drive the piling through the sand into the underlying clay, but it was found impossible to drive it to the depth required; even a water jet on each side of the pile

seemed to have no effect; after a certain number of blows from the hammer the timber would break or "cripple," in the weakest place, and would then have to be cut off.

On the north end, 186 lineal feet of piling was driven at an average depth of 22.9 feet.

On the west side, 56.4 lineal feet of piling was driven, at an average depth of 28.2 feet.

On the east side, 246.5 lineal feet of piling was driven, at an average depth of 13.6 feet.

At the south-east corner, 51.2 lineal feet of piling was driven, at an average depth of 20 feet.

There was driven a total of 13,310 running feet of timber, at a cost of $2,226.57, or $16\frac{7}{10}$ cents per running foot of timber driven.

The retaining walls still remain in very bad condition, and should be relaid at the earliest opportunity.

STONY BROOK.

The works at Stony Brook are in good condition, water has flowed over the dam 363 days during the year, wasting an aggregate of 10,000 million gallons.

At the same time Fresh Pond has been kept well filled.

Numerous hearings have been had during the year, before Commissioners, in the cases of Roberts, Boston Manufacturing Co., Peterson, and Sibley, for the taking of land at Stony Brook, and in cases of Somers, Gay, and Moran, for taking of land at Fresh Pond.

In some of these cases the award has been accepted, some have been appealed, and in some no decision has been given.

In order to determine the rainfall, yield, etc., of the Stony Brook water-shed, two rain gauges have been located, one at Roberts' Dam, in charge of the keeper, Mr. Thomas Bowman, and one on the farm of Mr. Alonzo S. Fiske, at about the centre of the basin.

In this connection, the following comparison may be of interest:

	Harvard Observatory.		Cambridge Pumping Station.	
	No. of days in which rain fell.	Total rainfall.	No. of days in which rain fell.	Total rainfall.
Dec. 1, 1888, to Dec. 1, 1889.		47.50 inches.	127.	60.08 inches.
Dec. 1, 1887, to Dec. 1, 1888.	139	55.16 "	141.	60.01 "
Mean for 5 yrs. to Dec. 1, 1888.	127		128.4	
" " 10 " " " " "		44.02 "		45.08 "
" " 47 " " " " "		45.80 "		

Respectfully submitted,

L. M. HASTINGS,

City Engineer.

REPORT

OF THE

SUPERINTENDENT OF STREETS.

To the Honorable the City Council: —

THE undersigned asks leave to submit for your consideration, his sixth annual report.

The appropriation for Street Department (repairs and the collection of ashes), for the financial year ending Nov. 30, was,	$119,029 58
Amount expended	118,718 19
Balance unexpended	$311 39

This amount has been expended for the necessary labor, materials, and utensils, employed in grading, repairing, and cleaning streets, and for collecting ashes. For the different items, see the Auditor's report.

The streets, with few exceptions, are in better condition at present than they ever have been, notwithstanding the unfavorable weather we have had during the past year, which was, if anything, worse than the year before; and I believed and stated then, that that year was the most unfavorable ever known for the wear and care of streets.

We are unfortunately situated in regard to the character of the foundation of our streets, the most of the heavily travelled ones being low and flat, with a foundation of either marsh mud, or clay; and to enable them to resist the great pressure of the heavy teaming over them, they would require a solid bed of large stone. This, of course, would necessitate a very large expenditure of money; and, with the increasing demands upon our finances, there is apparently little hope that enough can be appropriated for that purpose; yet, I hope that the incoming government may see its way clear to make a larger

appropriation than that made this year, although the present government extended the appropriation to the limit of its resources.

If the city could, in any possible way, find means to pave the principal heavily travelled thoroughfares with granite blocks, it would go far towards silencing the criticisms so frequently made on the condition of our streets, and would ultimately be a great saving to the city.

I most earnestly renew the recommendation made last year, that a ledge of suitable size and quality, and on the line of some railroad be procured, and that proper machinery for crushing the stone, be placed there, in order to furnish a sufficient supply of cracked stone for the proper construction and care of the streets; also that suitable lots of land be obtained, at convenient points for distribution, in different parts of the city, so that a supply of cracked stone may at all times be within easy reach of any section of the city where it may be needed.

The amount of gravel available for use in this department is very limited, and is of very poor quality; it is, in my judgment, simply a waste of money to put it on a street where there is any considerable amount of travel. So far as we can see, all the gravel fit for street or sidewalk paving, has been taken from our banks, and some steps should be taken immediately, looking towards a new and generous supply.

The following streets have been graded wholly, or in part, during the present year:

Albany Street, from Portland Street to line of Front Street.

Belmont Street, from Holworthy Street to Cushing Street.

Blackstone Street, from River Street to Day Court.

Binney Street, from Portland Street to Potter Street.

Brattle Street, South Side, from Elmwood Avenue to Mount Auburn Street.

Bristol Street, from Hampshire Street to Portland Street.

Cambridge Street, from Ellsworth Avenue to Kirkland Street.

Charles River Street, full length.

Concord Avenue, from Wyeth Street to Walden Street.

Cottage Street, from Pearl Street to Magazine Street.

DeWolfe Street, from Mt. Auburn Street to Flagg Street.

Dyke Street, full length.

East Street, full length.

Fayerweather Street, from Brattle Street to Reservoir Street.

Fifth Street, from Gore Street to Cambridge Street.

First Street, from Spring Street to Vine Street.

Green Street, from Putnam Avenue to Western Avenue.

Hampshire Street, from Cambridge Street to Broadway.

Harvard Street, from Clinton Street to Quincy Square.

Hubbard Avenue, from Walden Street to end.

Kirkland Street, full length.

Main Street, from Clinton Street to Quincy Square.

Mill Street, full length.

Mount Auburn Street, from Boylston Street to Putnam Avenue.

Ninth Street, from Cambridge Street to Spring Street.

North Avenue, from Alewife Brook to Meacham Street on North side, and to Spruce Street on South side.

Otis Street, from Seventh Street to Ninth Street.

Prospect Street, from Cambridge Street to Somerville line.

Putnam Avenue, from Pearl Street to Mt. Auburn Street.

Reed Street, full length.

Regent Street, full length.

Reservoir Street, from Fayerweather Street to Highland Street.

Second Street, from Spring Street to Net and Twine Factory.

Sixth Street, from Gore Street to Cambridge Street.

Somerset Street, full length.

South Street, full length.

Spring Street, from Sixth Street to Ninth Street.

Springfield Street, from Cambridge Street to Somerville line.

Vine Street, from Third Street to Fourth Street.

Walden Street, from the bridge to North line of Mead Street (paved).

Walden Street, from Dublin Street to South line of Garden Street.

Walden Street, from Mead Street to North Avenue.

Winthrop Street, from Holyoke Street to Boylston Street.

And other streets, too numerous to mention, have been patched more or less.

For streets accepted during the year, see City Engineer's report.

STEAM STREET ROLLER.

In May, 1887, the city purchased a steam street roller, of the Aveling and Porter make, of 17 tons capacity when loaded.

I have not altered my opinion expressed in my last two reports, as to the value of the steam roller, which has been in continuous use during the present season, and has done valuable and economical work. I shall, therefore, again ask the incoming government for an appropriation sufficient to purchase another of smaller capacity, feeling more than ever satisfied that it will be a paying investment for the city.

PAVING.

The appropriation for paving was	$36,350 00
Amount expended	36,109 26
Balance unexpended	$240 74

This amount has been expended in paving Broadway, from Main Street to the west side of Brewery Street, including the Square at the junction of Main Street and Broadway, and in the laying of brick sidewalks, edgestones, and gutters, besides a large amount of necessary repairing to those already laid, and to street paving heretofore laid.

The present City Government has already passed an order for the purchase of a sufficient number of granite paving blocks to repave Bridge Street, from the bridge line to the west line of East Street, and Cambridge Street from Bridge Street to the west line of First Street. There are no two places in the city, in my opinion, where the wear is any greater, and where good paving is needed so much.

The demands for edgestones and brick sidewalks are constantly increasing, and it would seem only fair and just, that when citizens are ready and willing to pay their share of the expense of laying them, they should not be compelled by the city to wait any length of time. Each year a number of orders are left unfinished, owing to an insufficient appropriation; and this year the number seems to have doubled; in fact, we now

have almost enough of such work on hand to exhaust the usual appropriation made for this work.

A very large amount of repairs to old brick sidewalks, edge-stones, and paving has been made this year, and there are still miles of sidewalks that need overhauling. I trust that the appropriation for this department may be considerably increased the coming year.

NORTH RIVER FLAGGING STONES, FOR STREET CROSSINGS.

At the beginning of the present year, there was purchased 3,830 square feet of North River flagging stone, at an expense of $1,455.40.

Every piece of this has been used for the purpose named, and an additional amount of 400 square feet was purchased late in the year, for crossings for the four corners of the new Public Library lot. We still have a number of orders for crossings on hand, which we have been unable to lay this year.

STREET WATERING.

The appropriation for Street Watering was	$18,337 64
Amount expended	15,067 41
Balance unexpended	$3,270 23

This amount was expended for labor watering the streets, repairs to the carts, and the incidental expenses of this department. A larger area of streets has been watered this year than any year since the city commenced to water streets. The carts were started out in April, and were not returned until the latter part of November. During the summer months, the streets were watered every Sunday morning, when it was needed, to the great satisfaction of all our citizens. The large balance unexpended is accounted for by the unusually wet season.

All of the carts will have to be repaired and painted during the present winter.

BRIDGES.

The appropriation for Bridges was	$8,000 00
Amount expended	3,531 89
Balance unexpended	$4,468 11

A larger appropriation will be required for this department the coming year. By an Act of the Legislature of 1888, the cities of Boston and Cambridge are required to widen the draws of the following bridges: Brookline Street, River Street, Western Avenue and Boylston Street.

This will entail an expenditure on the part of this city, of about $15,400, this amount being one half of the cost, as estimated by the City Engineer of Boston.

The rebuilding of the Sixth Street Bridge, recommended by the City Engineer last year, is now in progress; the contract for which, for various reasons, not being signed until late in the year.

As no part of the amount appropriated for this purpose has yet been paid out, a large unexpended balance is left in this department.

I am informed that it will be necessary to rebuild the River Street Bridge during the coming year. For further particulars as to the bridges, see City Engineer's Report.

The usual amount will be required next year for the ordinary expenses of this department.

SHADE TREES AND PUBLIC GROUNDS.

The appropriation for this department was	$4,800 00
Amount expended	4,514 68
Balance unexpended	$285 32

This department is in fair condition, but a more liberal appropriation should be made to allow for the care of the new property, which will be in charge of this department next year.

SCHEDULE OF PROPERTY OF THE STREET DEPARTMENT.

Thirty-five horses	$6,800 00
Thirty-six watering carts	11,295 00
One engine and stone crusher	3,500 00
One steam road roller	6,000 00
Five horse road rollers	1,500 00
Twenty-six carts	2,600 00
Thirty-two sets of harness	850 00
Amount carried forward	$32,545 00

Amount brought forward	$32,545 00
Eight wagons	640 00
Twenty-nine sleds and snow ploughs	1,875 00
Tools and stable furniture	913 00
One hay rack	100 00
One caravan	150 00
One lawn hand cart	80 00
Six lawn mowers	90 00
Three pungs	100 00
Three street sweepers	815 00
Garden hose	15 00
Two hundred and fifty tons of gutter stone	500 00
Twenty-two thousand block stone	440 00
One hundred and fifty tons of crossing blocks	375 00
Three hundred and twenty feet straight edgestone	150 00
One hundred, thirty-four feet circle edgestone	94 00
One hand pump	65 00
	$38,947 00

I desire, in conclusion, to express my thanks to the members of the Standing and Joint Committees for their generous assistance and direction during the past year; and to the other members of the City Council, for their indulgence and approval.

To His Honor, the Mayor, I am especially indebted, for the admirable system he has established of daily reports from the several police districts, of the defects in streets and sidewalks in each district. It has had the effect of enabling us to make the necessary repairs easily and quickly, and to him the credit is largely due.

I am also indebted to the heads of the different departments for their ready assistance, suggestions, and advice when needed.

Respectfully submitted,

JOHN McSORLEY,

Superintendent of Streets.

CAMBRIDGE, Nov. 30, 1889.

REPORT

OF THE

COMMISSIONER OF WEST BOSTON, CRAGIE'S, AND PRISON POINT BRIDGES.

The Commissioner for West Boston, Craigie's, and Prison Point Bridges submits, for himself and associate, the Nineteenth Annual Report on matters pertaining to West Boston and Canal Bridges, and the Thirteenth Annual Report on Prison Point Bridge.

WEST BOSTON BRIDGE.

By an act of the Legislature (Chap. 366, 1889), the cities of Boston and Cambridge were authorized to widen West Boston Bridge on its southerly side, not exceeding twenty feet, for street railway purposes, the expense thereof to be paid, wholly or in part, by the railway company. No action has been taken by said cities, and the work of repairing the bridge on the southerly side, which it was intended to do this year, has been postponed on this account; only such temporary repairs have been made as were absolutely required. In any event, it will be necessary to make the extensive repairs contemplated during the coming year, as the southerly sidewalk, from the draw to Cambridge, and the southerly bulkhead, near the Boston end, are in dangerous condition.

The bridge has been strengthened by adding extra girder-caps to all bents of piles not previously so repaired; seventy bents have been repaired this year.

Poles and wires have been erected for running street cars by electricity, with the necessary special structure for crossing the draw; the tracks of the street railroad have been relaid with heavier rails, and a considerable amount of repairing, in connection therewith, has been done.

The draw has been repaired, by renewing decayed timbers at the ends; a new under floor has been laid, and the surface sheathed. The use of elm plank for sheathing has not been found satisfactory, and its use has been abandoned, spruce sheathing being used, as heretofore. The draw has been painted, also the engine house.

As a whole, the bridge is old, narrow, and poor; it is impossible to maintain paving in a decent condition upon it. The amount of travel is very large, and there has been no change in the width of the bridge since 1854, while the travel has increased enormously. The draw, built in 1875, has almost reached the limit of life for a wooden structure, and it is a question of but a few years when the bridge must be replaced by a much wider and more modern structure, which will properly accommodate the street car travel, and furnish well paved roadways for teams.

CANAL, OR CRAIGIE'S BRIDGE.

A number of the oldest piles, near the Boston end, have been reinforced by new caps; a considerable amount of paving has been done, and a portion of the fender guard, near the draw, damaged by vessels, has been repaired by driving eight new piles and renewing the connecting timber work. The draw has been painted and the usual repairs made upon it.

The roadway paving should be mostly, or wholly relaid next year, and the flooring carefully examined and repaired where necessary.

The fender guard on the southerly side of the bridge should be repaired, the foundation of the engine house put in good condition, and the fences painted.

PRISON-POINT BRIDGE.

The wood work of the draw has been nearly all renewed, and the machinery for hoisting is now in process of repair, and will be put in good condition.

The usual statement is given of the number of draw openings, and the number of vessels which passed through.

WILLIAM J. MARVIN,

Bridge Commissioner for Cambridge, and Harbor Master on Charles and Miller's Rivers and Broad Canal.

NUMBER OF TIMES THE DRAWS IN THE WEST BOSTON, CRAIGIE'S, AND PRISON POINT BRIDGES HAVE BEEN OPENED, AND THE NUMBER OF VESSELS WHICH HAVE PASSED THROUGH DURING THE YEAR.

DATE. Dec. 1, 1888, to Nov. 30, 1889.	WEST BOSTON BRIDGE.		CANAL OR CRAIGIE'S BRIDGE.		PRISON POINT BRIDGE.	
	Number of Draw Openings.	Number of Vessels Passed Through.	Number of Draw Openings.	Number of Vessels Passed Through.	Number of Draw Openings.	Number of Vessels Passed Through.
Dec., 1888 . . .	157	223	249	263	22	24
January, 1889 .	36	50	137	156	20	28
February, " .	17	19	71	76	15	21
March, " .	42	54	148	163	10	14
April, " .	125	195	288	297	23	37
May, " .	188	274	400	407	21	24
June, " .	206	339	334	360	26	31
July, " .	285	463	456	512	22	28
August, " .	322	526	460	463	37	40
September, " .	222	381	365	370	32	33
October, " .	209	324	351	367	41	61
November, " .	234	378	363	384	26	33
	2,043	3,226	3,622	3,818	295	374

WEST BOSTON BRIDGE.

Statement of amount and kind of freight passed through draw, 1889:

Coal, 99,621 tons; stone, 10,999 tons; gravel, 1,675 tons; sand, 597 tons; paving stone, 40,700 stone; brick, 37,500; lime, 12,665 barrels; piles, 12,000 feet; lumber, 4,434,000 feet; wood, 1,977 cords; laths, 1,161,000; shingles, 2,406,000.

CANAL, OR CRAIGIE'S BRIDGE.

Statement of amount and kind of freight passed through draw, 1889:

Coal, 177,440 tons; stone, 72,335 tons; sand, 3,157 tons; gravel, 1,718 tons; street cleanings, 568 tons; gas pipe, 475 tons; loam, 150 tons; sulphur, 150 tons; paving stone, 138 tons; iron, 110 tons; lime, 27,134 barrels; cement, 2,450 barrels; kerosene oil, 1,800 barrels; lumber, 19,688,000 ft.; brick, 2,160,000; piles, 37,360; wood, 4,118 cords.

REPORT

OF THE

CAMBRIDGE WATER BOARD.

To the Honorable City Council of the City of Cambridge :—

THE Water Board herewith presents to you its twenty-fifth annual report, being for the year ending Nov. 30, 1889.

TOTAL COST OF THE WATER WORKS.

Cost of the Works, Nov. 30, 1888, as per last year's report	$2,539,780 00
Expended during the year ending Nov. 30, 1889, ...	70,553 09
Making the total expenditure . . .	$2,610,333 09

WATER BOND ACCOUNT.

Whole amount of Bonds issued . . .	$2,459,900 00
Amount paid from Sinking Fund . . .	828,400 00
Leaving unpaid Water Loan . . .	$1,631,500 00
From this deduct the present value of the Water Debt Sinking Fund, as per the Trustees' account	728,658 53
Leaving the amount of Water Loan yet to be provided for by the Sinking Fund in the future	$902,841 47

Statement in brief of the transactions in connection with the Water Works for the year ending Nov. 30, 1889:

GENERAL CONSTRUCTION ACCOUNT.

RECEIVED.

From excess of rates, fines, etc.	$41,237 23
From sale of auxiliary pump	100 00
From Harvard College	499 41
	$41,836 64

EXPENDED.

Amount expended on general construction	$41,836 64

STONY BROOK CONSTRUCTION ACCOUNT.

RECEIVED.

Balance of appropriation of 1888	$15,403 23
From bonds issued	20,000 00
Premium on $20,000.00 Water Bonds sold	1,973 66
	$37,376 89

EXPENDED.

On Stony Brook account	$26,030 39
Balance unexpended to new account	11,346 50
	$37,376 89

FRESH POND LAND PURCHASES, ETC.

RECEIVED.

Balance of the appropriation of 1886	$1,268 78
Sales of apples, etc.	46 00
Sales of old houses on estates at Fresh Pond	599 00
Transferred from Maintenance account by order of the City Council	1,500 25
	$3,414 03

EXPENDED.

For purchase of estates bordering on the Pond, examining titles, etc. . . .	$2,686 06
Balance unexpended carried to new account .	727 97
	$3,414 03

WATER RATES, FINES, AND SUPPLY ACCOUNT.

RECEIVED.

From Water Rates . .	$222,753 60	
Less rates refunded . .	1,628 90	
		$221,124 70
Shutting off and letting on water, sealing, fines, and rent		745 00
From supply account		8,255 75
Accrued interest on bonds sold . . .		298 00
From construction account		599 41
Sale of engine, hay, etc.		567 00
		$231,589 86

EXPENDED.

For General Construction account . .	$41,836 64
For Maintenance account	42,603 20
For Supply account	5,897 67
For interest on Water Loan	84,735 00
For paid into Sinking Fund, being three per cent. on $1,652,500	51,705 00
For transferred by the City Council to Fresh Pond Purchase account	1,500 25
Surplus of 1889, carried to the Sinking Fund	3,312 10
	$231,589 86

COMPARATIVE RECEIPTS.

Water rates for the year ending Nov. 30, 1889, ...	$221,124 70
Water rates for the year ending Nov. 30, 1888, ...	$211,156 27
Showing excess of water rates for 1889 .	$9,968 43

COMPARATIVE WATER SUPPLIED.

	Gallons.
Amount of water pumped in 1889	1,526,439,005
Amount of water pumped in 1888	1,514,483,582
Showing the increase for 1889 of	11,955,423

HOW THE WATER WAS USED.

	Gallons.
Amount of water sold by meter	319,139,800
Amount used in watering streets	51,377,498
Amount used for domestic, fire, fountain, and all other purposes	1,155,921,707
Making the total amount pumped	1,526,439,005

COMPARISON OF WATER CONSUMPTION, ETC.

	Gallons.
Daily average pumping for the year, for the high service through stand pipe	343,229
Daily average pumping for the year for the low or reservoir service	3,838,796
Making the daily average pumping	4,182,025

DAILY INCREASE IN CONSUMPTION OF WATER.

	Gallons.
Daily increase in consumption of water, 1886 over 1885	302,209
Daily increase in consumption of water, 1887 over 1886	476,307
Daily increase in consumption of water, 1888 over 1887	276,547
Daily increase in consumption of water, 1889 over 1888 was only	44,078

The falling off this year in the daily increase is almost unparalleled in our history, and can be accounted for only by the large amount of rainfall, as shown by the succeeding table, and the very remarkable fact, that there was not a dry month during the whole year, February, a winter month, showing the least rainfall of $2\frac{81}{100}$ inches, while all other months show from $3\frac{29}{100}$ to $8\frac{53}{100}$ inches, this last being in July, in midsummer. We have now had two remarkably wet seasons, the most so of any in our history as a water works. By reference to the table following, it will be seen that last year we had $60\frac{90}{100}$ inches rainfall, as against $60\frac{08}{100}$ inches this year, and both years were very much more than the two preceding years, resulting in using much less water by garden hose, and for watering streets.

RAINFALL AND HEIGHT OF WATER IN THE POND.

Months.	Rainfall.			Water in the Pond Below High Water, 16.85.		
	1887. Inches.	1888. Inches.	1889. Inches.	1887. Feet.	1888. Feet.	1889. Feet.
December	5.23	4.22	6.67	10.37	8.55	.91
January	5.28	3.32	6.64	10.80	5.37	.55
February	4.66	3.95	2.81	9.95	3.69	1.07
March	4.46	5.55	3.29	9.52	1.72	1.03
April	3.94	2.60	3.73	9.04	1.14	.88
May	1.79	6.36	5.65	9.30	.81	.87
June	1.86	3.25	3.44	10.20	1.12	.62
July	4.19	2.87	8.53	11.61	2.39	1.28
August	4.10	7.08	3.78	12.68	3.75	.84
September	1.36	8.28	5.30	12.73	3.24	2.06
October	3.22	4.83	3.73	12.66	1.37	2.81
November	3.90	7.70	6.51	12.05	1.25	1.75
Total for the year	43.99	60.01	60.08	10.91	2.87	1.22

STONY BROOK WATER SUPPLY.

We find, by the Engineer's report, that the daily consumption of water during the past year was 4,182,025 gallons, and by the Superintendent's report, we learn that the amount of water which daily run over our dam at Stony Brook, during the year, was 22,393,329 gallons, being more than five times the amount of water that we consumed during the same time; and showing an amount of water running over the dam to waste, so far as we are concerned, during the year, of more than 8,000,000,000 gallons of water. We do not forget that this is the result of a very wet season, and we have yet to prove our water supply in the dry seasons, which, in the course of nature, are sure to come in the future; but we think, with such a liberal margin as shown, there is no ground for fear, but rather it is a source of great satisfaction that our resources are so ample.

The quality of the water has given universal satisfaction, and the degree of hardness has been reduced more than one-half of what it was, when the water was introduced, thus making great improvement for washing and other domestic uses.

LAND TAKEN AROUND FRESH POND.

During the past year, the land which the city was authorized to take bordering on the Pond, and in that vicinity, has all been taken or purchased. What was purchased will soon be settled and paid for, while the ice-house properties and Dr. Somers, wait the slow process of the law, and nothing has yet been done in making a settlement with the Sisters of St. Joseph.

WORK DONE AROUND THE POND.

During the year, a decided advance has been made in filling and grading up the low places and bog-holes around the pond. Several acres have thus been graded and sown down to grass, presenting a neat, clean, and attractive surrounding to our

Storage Reservoir. Arrangements were made with the Fitchburg Railroad to widen our driveway at Boat-house nook; a new fence has been built along the railroad, and painted, which adds much to the convenience and appearance of the entrance to our driveway from Fresh Pond Lane.

FRESH POND DRIVE.

The drive cannot be extended any farther around the pond, until the ice-houses are removed; it is kept in good condition, and the number of pleasure riders about the pond is constantly increasing. We would repeat what we said last year, that there is one thing which seriously interferes with the pleasure and comfort of a drive around our pond, and that is the, at times, intolerable stench that comes from the Niles hog-slaughtering establishment, near Concord Avenue, and not far from Fresh Pond. At times this stench extends to the high land on Arlington, Washington, and other streets in that neighborhood, where are some of the finest residences in the city, and, at other times, the smell is blown over and across the pond to our engine house, and beyond, creating a nuisance in all that region. We think some way should be devised, at an early day, to abate this nuisance.

WORK AT THE ENGINE HOUSE.

The pump that was changed, last year, from a pumping capacity of 5,000,000 gallons in twenty-four hours, to that of 10,000,000 gallons in the same time, has proved an entire success, and has done a large part of the pumping the past year. A contract was made with the Blake Pump Manufacturing Company to change the other pump in the same way; the work has been delayed by the loss of some of the large castings, but is now going forward with the prospect of an early completion. When done, we shall have our pumping power for our low, or reservoir service, provided for many years to come, and well duplicated, as all pumping power should be, where the water supply of a large city is depending upon it.

OUR FEEDING RESERVOIR.

For several years this reservoir has shown signs of weakness, and occasional leaks breaking out has occasioned some anxiety and uneasiness. This year an examination was made, and the advice of M. M. Tidd, an expert engineer, was procured, and it was agreed by him, and our own City Engineer, that the wisest thing to do would be to drive a row of sheet piling, four inches thick, tongued and grooved, around those parts of the reservoir where any weakness had appeared, or where it would seem the bank needed strengthening the most; this has been done, and our anxiety is removed. There are portions of the outside walls that will have to be taken down and re-laid in cement. It was so late in the season when the piling was completed, that we were obliged to postpone repairing the wall until next spring, when we hope to complete these much-needed repairs on our reservoir.

DRAIN ON THE WEST SIDE OF THE POND.

We had provided for, and intended to have laid, a drain on the west side of the pond, to carry away the objectionable surface water, that comes from the Belmont district, including Richardson's Pond; but the water on the meadows, north of Concord Avenue, was so high that we could not do the work. We very much regretted this, as the water coming into the pond from this source is the only place where we have not succeeded in keeping all impure waters, of any amount, out of the pond.

WORK TO BE DONE.

We recommend the following work to be done the ensuing year: —

First. Construct a drain that will carry away the surface and drainage water coming from Richardson's Pond, and the Belmont district from our pond. We have already stated the reason why this was not done during the past year. We have

had a careful survey made of the meadows, and the natural outlet of the waters from them. We find, through our City Engineer, that Alewife Brook has been filled, in its channel, to a depth of more than two feet in two places, and these obstructions prevent the water from draining off as it formerly did. We would recommend that steps be taken, at an early day, to dredge out Alewife Brook, down to its natural depth, so that waters may run off from the meadows, and give us a chance to put in the drain on the west side of the pond, and keep that large amount of water out of our water supply. It seems to us plain that this work should be done by the Sewer Department. Its necessity is imperative.

Second. The good results of the past year, in work done around the pond in filling and grading the low lands and nooks, shows the desirability of proceeding with this work as rapidly as possible. It is evident that this work must ultimately all be done, and we think the quicker it is done the better. This work done, after that the work of beautifying the surroundings of what will be known in the future as Fresh Pond Park, can be done gradually, a little each year. As all the work done about the pond is given to our citizens who need it most, we have no hesitation in recommending that liberal appropriations be made to enable us to prosecute these needed improvements with vigor the coming year.

Third. The removal of the auxiliary pumping house on the borders of the pond. This work we intended to have done last winter, but the ice did not freeze enough to make a scaffold for us to work upon. As soon as the ice is sufficiently strong, we shall make this removal this winter.

Fourth. In connection with re-laying a portion of the wall of the reservoir, already referred, there should be built a chronograph house near the stand-pipe, one that can be kept warm in the winter, so that we can know automatically what the consumption of water is during the night time, when the water is being drawn from the reservoir to supply the city. By this means any large leak in our pipes can be at once shown, and the necessary steps taken to locate and repair the damage as speedily as possible.

REMARKS.

We would again call your attention to Section 25 of the Water Ordinances, which reads "For water used by the city, an account shall be made, and the amount thereof shall be charged to the proper appropriations and credited to the Water Works." For the past four years the City Council have sent a communication to the Water Board, to have these charges abated, and we could not gracefully do otherwise than comply with their wishes. We called attention to this last year, but no notice seems to have been taken, practically, of our views. We now propose to specify more clearly our reasons for thinking that this course is not wise, and in some respects unjust.

First. It is contrary to the custom and usages of other cities, and does not give our Water Department a fair showing when compared with others.

Second. It is unjust to our water takers, for upon them is put the burden of supplying all departments of the city with water. In the city are many buildings, owned by non-residents. They have the benefit of our Fire Department and Police Department to protect and preserve their property. The Fire Department would almost be useless without water, and yet, under the present system, these non-residents escape any tax on that alone which makes the department efficient. Again, in watering the streets, a large number of our people get the benefit of the absence of dust, and improved streets, who pay no water tax, and they are by this system freed from paying their share towards this expense, all of which would be equitably met by observing the ordinance above quoted. We think the ordinance should be enforced, and when the water rates exceed, with this income added, what is needed to sustain the works properly, reduce the water rates. Such a course would be just and proper, in our judgment, and we think if our water takers understood the matter as we do, they would demand that they should not be called upon to pay more than their share towards running the city government. Another injustice we must call your attention to, which we referred to last year, but of which we find no practical notice, and that is, the thousands of loads of gravel, taken from the land that the Water Works have bought or taken (and are yearly paying the interest charge on the purchase money, and providing a sinking fund to

pay the principal when due), and using the same on the street department, with no credit made to the Water Works, as evidently should be done. We think these matters are worthy of your attention, and so commend them to your good judgment.

Third. The last reason is, that the Water Works, for their own use in completing the improvements around Fresh Pond for the protection of our water supply, will need all the surplus, beyond necessary charges, for a few years to come. This is directly in the interest of the water takers, and we have no doubt that they will cheerfully pay the present rates for a few years longer, provided the money is expended for their benefit, after which the rates can be safely reduced.

REFERENCE TO OTHER REPORTS.

For the details of what has been done, and the present condition of the Water Works, we would refer you to the reports made to the Board by the Superintendent, Registrar, and Pumping Engineer, which we herewith transmit to you, and adopt as a part of our report to you.

In closing, we take pleasure in acknowledging the cheerful assistance rendered by our new City Engineer. While we lament and mourn the loss of Mr. Barbour, who so long and faithfully served the city, we are glad to have one to succeed him who was so long under Mr. Barbour's tuition, and has learned so many of his ways. Our City Solicitor has been constantly engaged in the litigation growing out of the land takings by the Water Board. Several have been decided, and so far as a settlement has been reached the city's interests seem to have been well represented and protected. The officers of the company, being the Registrar, the Superintendent, and those acting under them, have all discharged their duties faithfully. Mr. Brooks, our Pumping Engineer, is now engaged in superintending the changes being made at the engine house in Engine No. 1.

All of which is respectfully submitted,

C. W. KINGSLEY,
L. M. HANNUM,
JAS. M. W. HALL,
GEO. H. HOWARD,
JOHN F. O'BRIEN,
EDWARD A. BINGHAM.

REPORT

OF

THE WATER REGISTRAR.

WATER REGISTRAR'S OFFICE,
CAMBRIDGE, Dec. 7, 1889.

To the Cambridge Water Board :—

IN compliance with the requirements of the City Ordinance, I present the twenty-fifth annual report of the operations of this department, showing the receipts, expenditures, and abatements, together with a statement of the number of water takers, fixtures, etc., for the year ending Nov. 30, 1889.

Amount of bills remaining unpaid, Nov. 30, 1888:

Water rates	$132 45
Meter rates	198 50
Supplies and repairs	1,433 17
Rent	45 00

Amount of bills placed in hands of City Treasurer for collection from Nov. 30, 1888, to Nov. 30, 1889:

Water rates	179,720 38	
Meter rates	47,330 78	
Supplies and repairs	8,137 59	
Off and on water, rent, seals, and fines	877 50	
		$237,875 37

There have been collected:

Water rates	$222,753 60
Off and on water, rent, seals, and fines	745 00
Supplies and repairs	8,255 75

There have been abated:

Water rates	3,866 91
Supplies and repairs	39 82
Amount carried forward,	$235,661 08

Amount brought forward, . . .	$235,661 08	

There remain unpaid:

Water rates	559 45	
Meter rates	202 15	
Supplies and repairs	1,275 19	
Rent	177 50	
		$237,875 37

EXPENDITURES.

Construction account (Stony Brook) . . .	$26,030 89	
Construction account (Fresh Pond land purchase)	2,686 06	
Construction account (general)	41,836 00	

Maintenance account, viz.:

Care and repairs . . .	$26,683 87		
Pumping service . . .	11,544 71		
Office expenses . . .	4,374 62		
		$42,603 20	
Supply and repair account		5,897 67	
			$119,053 82

ABATEMENTS.

Water rate bills to the amount of . . .	$3,866 91	
Supply and repair bills to the amount of . .	39 82	
		$3,906 73

REFUNDS.

Water rates, to the amount of	$1,628 90	
Which amount, deducted from the receipts .	222,753 60	
Leaves net receipts for water . . .	$221,124 70	
Add off and on water, rent, seals, and fines .	745 00	
Makes net receipts of "Rates, fines, etc." . .		$221,869 70

OFF AND ON.

Water has been shut off for non-payment of rates, or per order on account of vacancy, and seals have been applied to fixtures by request of owners, or occupants, as follows:

Supplies shut off in 1889	427
Supplies let on, shut off in 1889	328
Supplies let on, shut off in previous years	72
New supplies let on	379
Seal locks applied to fixtures in 1889	534
Seal locks removed, put on in 1889	272
Seal locks removed put on in previous years . . .	177

COMPARATIVE STATEMENT.

	1888.		1889.	
Construction Account (Stony Brook)				
RECEIVED.				
From bonds issued (par value) additional appropriation by City Council	$25,000 00		$20,000 00	
From premium on bonds sold	2,368 00		1,973 66	
Sale of tickets, "Boston and Roberts"	9 00		—	
Balance of appropriation	51,070 92		—	
		$78,447 92	15,403 23	$37,376 89
EXPENDED.				
Sundry bills	$63,006 09		26,030 39	
Balance of appropriation	15,441 83		11,346 50	
		$78,447 92		$37,376 89
Construction Account (Fresh Pond Land Purchase.)				
RECEIVED.				
Balance of appropriation	$16,606 70		$1,268 78	
Sale of apples	62 65		46 00	
Sale of apples, and houses on Tudor and Middlesex Savings Bank estates	—		599 00	
Transferred from maintenance account, by order of City Council	—		1,500 25	
		$16,669 35		$3,414 03
EXPENDED.				
Purchase of sundry estates, etc	$15,400 57		$2,686 06	
Balance of appropriation	1,268 78		727 97	
		$16,669 35		$3,414 03
Construction Account (General).				
RECEIVED.				
From excess of receipts from "Rates, fines, etc."	$24,256 84		$41,237 23	
From Town of Belmont (grading on Cushing street)	20 00		—	
Sale of auxiliary boiler and pump	600 00		—	
Sale of "Follansbee" pump			100 00	
From Harvard College (extension of main pipes to "Holmes" field			499 41	
		$24,876 84		$41,836 64
EXPENDED.				
Sundry bills	—	$24,876 84	—	$41,836 64
Maintenance Account.				
RECEIVED.				
Accrued interest on Water Bonds	$228 00		$298 00	
From "Rates, fines, etc."	$211,811 22		221,869 70	
From sale of engine, hay, etc	—		567 00	
		$212,039 22		$222,734 70
EXPENDED.				
Care and repairs	$41,951 32		$42,603 20	
Interest on Water Debt	89,765 00		84,735 00	
Paid to Sinking Fund Commissioners	49,575 00		51,705 00	
Transferred to Fresh Pond Land Purchase account, by order of City Council	—		1,500 25	
		$181,291 32		$180,543 45
Excess of receipts	—	$30,747 90		$42,191 25
Supply Account.				
Received		$6,149 67		$8,255 75
Expended		5,216 31		5,897 67
Excess of receipts		$933 36		$2,358 08

COMPARATIVE STATEMENT — *Continued.*

1888.	Maintenance Account, excess of receipts	$30,747 90
	Supply Account, excess of receipts	933 36
	Excess of total receipts over total expenditures	$31,681 26
	Expended on Construction Account (general)	24,256 84
	Balance due Sinking Fund	$7,424 42
1889.	Maintenance Account, excess of receipts	$42,191 25
	Supply Account, excess of receipts	2,358 08
	Excess of total receipts over total expenditures	$44,549 33
	Expended on Construction Account (general)	41,237 23
	Balance due Sinking Fund	$3,312 10

The excess of receipts for 1889, as shown in the above comparative statement, amounting to $3,312.10, has been carried to the Sinking Fund, as required by law.

Statement of the yearly revenue received from water-rates since the purchase of the works by the city :—

From	April 28, 1865,	to	Dec. 1, 1865	$32,367 19
"	Dec. 1, 1865,	"	1, 1866	40,073 27
"	" 1, 1866,	"	1, 1867	52,733 62
"	" 1, 1867,	"	1, 1868	63,747 42
"	" 1, 1868,	"	1, 1869	76,149 30
"	" 1, 1869,	"	1, 1870	92,606 95
"	" 1, 1870,	"	1, 1871	111,782 65
"	" 1, 1871,	"	1, 1872	127,201 30
"	" 1, 1872,	"	1, 1873	146,117 32
"	" 1, 1873,	"	1, 1874	153,634 27
"	" 1, 1874,	"	1, 1875	138,880 37
"	" 1, 1875,	"	1, 1876	179,166 76
"	" 1, 1876,	"	1, 1877	154,843 59
"	" 1, 1877,	"	1, 1878	157,443 91
"	" 1, 1878,	"	1, 1879	164,681 90
"	" 1, 1879,	"	1, 1880	173,325 49
"	" 1, 1880,	"	1, 1881	170,062 73
"	" 1, 1881,	"	1, 1882	177,430 80
"	" 1, 1882,	"	1, 1883	179,361 89
"	" 1, 1883,	"	1, 1884	161,526 27
"	" 1, 1884,	"	1, 1885	185,544 36
"	" 1, 1885,	"	1, 1886	199,404 43
"	" 1, 1886,	"	1, 1887	204,748 64
"	" 1, 1887,	"	1, 1888	211,156 27
"	" 1, 1888,	"	1, 1889	221,124 70

In addition to the manufactories, etc., supplied by meter, water is supplied to 15,040 families, 958 stables, with 2,766 horses and 326 cows, 241 shops, 537 offices and stores, by the following fixtures, viz. : —

18,025 faucets,	9 hopper closets,
5,079 wash basins,	89 urinals,
3,815 wash-tubs,	35 yard hydrants,
3,158 bath tubs,	4 fountains,
812 slop closets,	7 tumbler washers,
8,922 pan closets,	1,291 hand hose.

Also,

651 fire hydrants (beside 17 on private premises),
8 fire reservoirs,
16 drinking fountains in public squares.

The above schedule of fixtures is exclusive of the school-houses, engine houses, police stations, and other city buildings.

A careful house-to-house inspection for leaks and waste of water has been made, with the usual result of checking waste of water, and causing the repair of numerous imperfect fixtures. Incidental to this inspection, a considerable number of additional fixtures, etc., were found, for which water-rate charges have been made.

Respectfully submitted,

WALTER H. HARDING,
Registrar.

REPORT

OF THE

COMMITTEE ON ACCOUNTS OF THE CAMBRIDGE WATER BOARD.

We have examined the abstract of accounts as presented to us by the Water Registrar, covering the records of the past year.

We have compared it with the statements submitted to us by the City Treasurer and Auditor, and we find them to be correct and in agreement.

Annexed is the financial statement presented to us by the Water Registrar, and verified by us:

Amount of bills in hands of City Treasurer, Nov. 30, 1888:—		
For water-rates and rent	$375 95	
For supplies and repairs	1,433 17	
		$1,809 12
Amount of bills delivered to the City Treasurer for collection during the year ending Nov. 30, 1889:—		
For water-rates	$179,720 38	
For meter rates	47,330 78	
For supplies and repairs	8,137 59	
For off and on, rent and seals	877 50	$236,066 25
Total bills		$237,875 37
There have been abated	$3,906 73	
There have been refunded	1,628 90	$5,535 63
		$232,339 74
There have been collected	$231,754 35	
Balance uncollected Nov. 30, 1889, water-rates .	761 60	
Balance uncollected Nov. 30, 1889, supplies and repairs	1,275 19	
Balance uncollected Nov. 30, 1889, rent . .	177 50	
	$233,968 64	
Less refunded as above	1,628 90	
		$232,339 74

JAS. M. W. HALL,
HENRY H. GILMORE,
EDWARD A. BINGHAM,
Committee on Accounts.

Cambridge, Dec. 1, 1889.

CITY OF CAMBRIDGE,
OFFICE OF CITY TREASURER, Dec. 1, 1889.

To the Cambridge Water Board :—

GENTLEMEN : I give you herewith a record of the transactions between the Water office and the City Treasurer's Office during the year ending Nov. 30, 1889 :

Gross collections for account of Water Works, rates, fines, etc.	$227,365 51
Abatement certificates received and allowed on water rates	3,866 91
Gross collection for account of Water Works "supply account"	8,295 57
Abatement certificates received and allowed for supply account	39 82
Refund checks have been received and paid amounting to	1,628 90
Uncollected bills in my hands, Nov. 30, 1889, for water rate account, amount to	761 60
Uncollected bills in my hands, Nov. 30, 1889, for rent account, amount to	177 50
Uncollected bills in my hands, Nov. 30, 1889, for supply account, amount to	1,275 19

Respectfully,
WM. W. DALLINGER,
City Treasurer.

CITY OF CAMBRIDGE,
OFFICE OF AUDITOR OF ACCOUNTS, Dec. 1, 1889.

To the Committee on Accounts of the Cambridge Water Board :—

GENTLEMEN : In accordance with your request, I herewith present a statement from my books for the year ending Nov. 30, 1889 :

WATER WORKS (RATES, FINES, ETC.).

Amount of uncollected bills in City Treasurer's hands, Dec. 1, 1888		$375 95
Amount of bills placed in City Treasurer's hands for collection		$227,928 66
Total		$228,304 61
Amount collected by City Treasurer		227,365 51
Balance uncollected		$939 10
Amount of abatements allowed by City Treasurer	$3,866 91	
Amount of refunds paid by City Treasurer	1,628 90	

WATER WORKS (SUPPLIES).

Amount of uncollected bills in City Treasurer's hands, Dec. 1, 1888	$1,433 17
Amount of bills placed in City Treasurer's hands for collection	8,137 59
Total	$9,570 76
Amount collected by City Treasurer	8,295 57
Balance uncollected	$1,275 19
Amount of abatements allowed by the City Treasurer, $39 82	

Respectfully submitted,

HARRY T. UPHAM,

Auditor.

ANNUAL STATEMENT OF THE WATER REGISTRAR

TO THE

COMMITTEE ON ACCOUNTS, DEC. 1, 1889.

Water-rates unpaid, Nov. 30, 1888	$330 95		
Rent unpaid, Nov. 30, 1888	45 00		
		$375 95	
Bills and refund checks placed in hands of City Treasurer, from Dec. 1, 1888, to Dec. 1, 1889: —			
Water-rates from annual ledgers	$168,422 70		
Water-rates from fractional ledgers	11,297 68		
Water-rates from meter ledgers	47,330 78		
Off and on water	351 50		
Rent	421 00		
Seals	105 00		
Refund checks	1,628 90		
		$229,557 56	
Total bills and refund checks on "Rates, fines, etc."		$229,933 51	
Supply and repair bills unpaid, Nov. 30, 1888	$1,433 17		
Supply and repair bills placed in hands of City Treasurer, from Dec. 1, 1888, to Dec. 1, 1889	8,137 59		
		$9,570 76	
Total bills and refund checks			$239,504 27

There has been collected:			
Annual ledgers	$166,303 49		
Fractional ledgers . . .	9,357 03		
Meter ledgers	47,093 08		
Off and on water	351 50		
Rent	288 50		
Seals	105 00		
Total collections on "Rates, fines, etc." . . .		$223,498 60	
Collections on supply and repair account		8,255 75	
Total collections . . .		$231,754 35	
There have been refunded, water-rates	$1,628 90		
There have been abated, water-rates	3,866 91		
There have been abated, supplies and repairs	39 82		
There remain uncollected, water-rates	761 60		
There remain uncollected, supplies and repairs	1,275 19		
There remain uncollected, rent .	177 50		
		$7,749 92	
			$239,504 27

Attest: WALTER H. HARDING,
Registrar.

REPORT

OF THE

SUPERINTENDENT OF THE CAMBRIDGE WATER WORKS.

CAMBRIDGE, NOV. 30, 1889.

*To the **President and Members of the Cambridge Water Board:***

GENTLEMEN: I herewith present the annual report of the Superintendent, upon the condition of the works and the operations of the past year.

The total amount of water pumped was 1,526,439,005 gallons. Coal consumed per million gallons pumped, $1,543\frac{98}{100}$ pounds.

Water sold by meter and that used for watering streets, 370,517,298 gallons, leaving, as the amount for domestic use, 1,155,921,707 gallons.

Number of gallons daily for each inhabitant on the whole amount pumped, $56\frac{89}{100}$ gallons.

Number of gallons daily for each inhabitant on amount for domestic use, $43\frac{8}{100}$ gallons.

STONY BROOK WORKS.

Water has been drawn from Stony Brook in quantities sufficient to keep the Cambridge Receiving Reservoir full. There have been but two days during the entire year when the water has not flowed over the waste way at Stony Brook, namely, June 2d, and June 7th; the water ceased flowing for a few hours only on each of these days.

The daily average number of gallons (by the month) flowing over the waste way was as follows :

December,	1888,	68,208,570	gallons.	June,	1889,	13,188,469	gallons.
January,	1889,	47,977,417	"	July,	"	4,632,430	"
February,	"	16,948,014	"	August,	"	20,286,869	"
March,	"	20,286,869	"	September,	"	8,282,222	"
April,	"	20,845,956	"	October,	"	13,188,469	"
May,	"	13,188,469	"	November,	"	21,686,204	"

Daily average amount wasted for the year, 22,393,329 gallons.

A rain gauge has been set near the dam, and a record of the rainfall is now being kept.

No repairs on these works have been needed. The walks have received the necessary care and the grass kept cut.

A wooden house has been built over the thirty-six inch waste gate in the cut east of South street, and a gear, with crank attachment, has been connected to the gate. These improvements add greatly to the convenience and ease in manipulating this very important gate.

Owing to the rough usage that was given to the roof while rebuilding the dwelling-house, the south roof will need to be reshingled during the coming year.

I would recommend that the bank adjoining the east end of the dam be graded and seeded down to grass.

STONY BROOK PIPE LINE.

No leaks have occurred on the Stony Brook pipe line.

All gates and blow-offs have been carefully inspected and their locations marked.

FRESH POND AND ITS SURROUNDINGS.

The old house on the Somers' estate, on Concord avenue, has been sold and removed. The stable connected with it has been moved about 500 feet nearer Concord avenue, in close proximity to the brick house. It was thoroughly repaired and fitted up, and is now occupied by this department as a stable for the single team that was purchased for general work on the roadway and surroundings of the pond.

The brick dwelling-house near Black's Nook has been repaired,

painted, and arranged for two families, and is now occupied by a teamster, and a fireman at the pumping station.

The hay on the Somers' estate was cut and stored in the stable on Concord avenue; that on Kingsley, Tudor and Concord Avenue Parks was sold standing.

On March 8th, general work of improving the borders of the basin was commenced. The willow trees at the head of Black's Nook, near Concord avenue, were cut down, and a large amount of filling done in the nook, which has very much improved the appearance of this unsightly place.

That portion of the old gravel-pit, lying between the roadway and the Fresh Pond Ice Company, was graded and sown down.

The territory on the west side of the pond, lying between Eam's dam and Bright's Nook dam, has been graded and sown down.

The clay bank between the Fitchburg Railroad track and the fountain has been cut down, graded to correspond with its surroundings, covered with loam, and sown down to grass.

Total amount of grading done, about 14 acres.

The full width of pipe location at the head of Holworthy street cut has been filled in and graded. A substantial fence has been erected on each side of this location.

The old house on Cushing street opposite Cider Mill Pond was sold and removed. The material from the high bank on which this house stood has been used to fill in the pond back of Eam's Nook dam, and for filling and grading a long distance into the swamp. This unsightly pond has been entirely filled. The appearance of this portion of the borders of Fresh Pond has been greatly improved, and when the work is fully completed it will make a very attractive place.

The collection of lumber, brick, and stone near the Fitchburg Railroad depot has been removed, and the necessary grading done.

The Fitchburg Railroad Company signified its willingness to rebuild the fence on its location bordering the head of Boat-House Nook. Arrangements were made to deflect the line on the Company's location in order to give a uniform width to the driveway at that place, and permission was obtained to place pickets on the rail fence which was built by it. When this work was done, the whole fence was painted.

A guard fence has been erected on the west side of the road leading from the Fitchburg bridge to Boat-House Nook.

A cesspool has been built, and drain laid from it to the sewer in order to carry off the water from roadway, north from the gate near the depot.

An eight-inch by-pass has been connected around the thirty-inch gate in the gate-house on the south side of Fresh Pond, at the foot of Holworthy street cut. This has proved a complete success, as one man now can manipulate either gate with great ease without causing any shock or water-hammer from opening or closing the gates.

Signs have been placed over the entrances to the driveway around the Pond, on Concord avenue west of Fitchburg depot, at the Fitchburg depot, at Holworthy street cut, at Cushing street, near Cider Mill Pond, and at Concord avenue.

The water in Fresh Pond reached its highest point, 16.62, on Jan. 8th. Water was received from Stony Brook nearly all the year until late in September, when, anticipating the laying of a drain and to facilitate the work, the fountain was shut off, and the water allowed to run down to its lowest point, 13.72, which occurred Oct. 12. The average height was 15.63. The rainfall for the year was 60.08 inches.

PUMPING WORKS.

At this date the work of rebuilding No. 1 pump is being carried forward as fast as possible. Owing to accidents in casting the large water cylinders, there will be a greater delay in getting this pump into commission again than was anticipated when the contract was let.

While putting in the coal an accident occurred whereby the sixteen-inch end wall, dividing the boiler-room from the coal-shed, was broken down. About two thirds of this wall was rebuilt, and has been constructed so that a like accident may not happen again.

No other repairs have been made on the building. The balustrade and tin roof on the engine house will need extensive repairs during the coming season.

A dynamo has been attached to the small engine in the basement, and the whole of the building is now lighted by electricity which greatly diminishes the expense of lighting.

Drains were laid from all the conductors from the coal-shed, and two cesspools built to carry the surface drainage from the driveway.

The grounds around the engine house and Tudor Park have received necessary care. I most respectfully call your attention to the need of a good, substantial fence around these lots.

RESERVOIR.

The work of thoroughly repairing the reservoir was commenced on Sept. 10th. Four-inch sheet piling was driven as follows: fifty-one feet on the northeast corner, at a depth of twenty feet, one inch; north, from the centre wall on the east side, two hundred sixty-four and one-half feet, at an average depth of fourteen and two-tenths feet; across the north end one hundred and eighty-six feet, at an average depth of twenty-two feet, nine inches; around the corner and on the west side, on Reservoir street, sixty-four feet, at a depth of twenty-eight and two-tenths feet. This piling was driven about four feet outside of the capping-stone of the basin, and cut off about one foot below the surface; then a four-inch by eight-inch ribbon was bolted on each side, one foot below top of piling, thoroughly securing the tops.

Owing to the lateness of the season, the work of repairing the walls was postponed until the coming spring.

Water was discovered soaking through the bank on the east side in front of Mr. Reed's stable. As the indication of a leak was only perceptible when the reservoir was filled above the paving, the water in the reservoir was kept down in order to make investigation and repairs. It was found that there was a small opening in the cement joint connecting the bank paving with the capping-stone; this was repaired.

June 4th, water was discovered trickling from under the retaining wall on the east side near Mr. Gould's house. Like the other, this leak could only be seen when the reservoir was filled above the paving. On making repairs, a large quantity of the upper courses of stone was removed. It was found that the bank had settled from under the capping-stone, and from back of two rows of paving. This caused the cement seams to crack, and allow the water to trickle through. When this was

repaired, an investigation was made and no other settlings or cracks were discovered.

The driving of the sheet piling is expected to prevent any farther leakage through the banks, and when the retaining walls are repaired, the reservoir will be in good condition and secure for several years.

HIGH SERVICE.

The following amount of pipe has extended the high-service system this year: 197 ft. of 4-in., in Bellevue avenue; 48 feet of 6-in. in Crescent avenue, and 714 ft. of 6-in. in Lambert avenue.

PIPE YARD.

The pit, back and under the stable, has been filled with gravel.

A cesspool has been built, and a drain laid to convey the drainage from the stable to the sewer.

The buildings will need painting during the coming season.

BROOKLINE STREET PIPE BRIDGE.

The pipe-house is in good condition, no repairs have been needed.

SIPHONS.

A new covering has been put on the siphon casing at Broad Canal, on Third street.

Accompanying this report is that of the engineer at the pumping station, and the following tables, showing the locations of meters, fountains, and stand pipes; the details of main and supply extensions, and the account of stock on hand.

Respectfully submitted,

HIRAM NEVONS,

Superintendent.

MAIN PIPE.

Main pipes have been laid in the following streets: 170 ft. of 4-in. in Allston street (renewal); 44 ft. of 8-in. in Albany street; 122½ ft. of 2-in. in Athens court; 3 ft. of 1½-in. and 662½ ft. of 6-in. in Auburn place; 171 ft. of 4-in. Auburn street near Sidney street; 3 ft. of 1½-in., 197 ft. of 4-in., and 5 ft. of 6-in. in Bellevue avenue; 3 ft. of 1½-in. and 233 ft. of 6-in. in Belmont street; 3 ft. of 1½-in. and 165½ ft. of 6-in. in Binney street; 279 ft. of 6-in. in Binney street at Third street; 110 ft. of 2-in. in Blackstone-street court; 34 ft. of 4-in. in Blanche street; 11 ft. of 6-in. and 2 ft. of 8-in. in Cambridge street at Harding street; 36 ft. of 4-in. in Carlisle street; 217 ft. of 4-in. and 8 ft. of 6-in. in Channing street; 60 ft. of 6-in. in Clay street; 6 ft. of ¾ in., 917 ft. of 6-in. and 2 ft. of 8-in. in Clinton street (renewal); 75 ft. of 4 in. in Columbia street; 114 ft. of 1¼ in. and 46 ft. of 4-in. in Cottage Park avenue; 120 ft. of 6-in. in Creighton street; 48 ft. of 6-in. in Crescent street; 97½ ft. of 6-in. in Cushing street; 3 ft. of 1½ in. and 170 ft. of 4-in. in Daniels' court (renewal); 6 ft. of 1½-in. and 205½ ft. of 6-in. in Dublin street; 2 ft. of 1½ in. and 209 ft. of 6-in. in Dudley street; 5 ft. of 6-in. in Eighth street; 3 ft. of 12-in. in Elmwood avenue; 121½ ft. of 4-in. in Emery court; 84 ft. of 4-in. and 5 ft. of 6-in. in Francis avenue; 2 ft. of 6-in. in Franklin street at Bay street; 60 ft. of 6-in. in Front street; 6 ft. of 6-in. in Hampshire and Bristol streets; 2 ft. of 3-in. and 12 ft. of 6-in. in Hampshire and Elm streets; 60 ft. of 6-in. in Harvey street; 39 ft. of 4-in. in Holly avenue; 338 ft. of 4-in. and 745 ft. of 6-in. in Holmes Field (for Harvard College); 15 ft. of 6-in. in Howard street; 3 ft. of 1½-in. and 131 ft. of 4-in. in Howland street; 201½ ft. of 4-in. in Huron street, west from Lake View avenue; 761 ft. of 8 in. and 191 ft. of 6-in. in Irving street; 22 ft. of 6-in. in Kinnaird street; 714 ft. of 6-in. in Lambert avenue; 3½ ft. of 1½-in., 191½ ft. of 6-in. in Lexington avenue; 113 ft. of 4-in. in Madison street; 48 ft. of 4-in. in Magee street; 3 ft. of 1½ in. and 126 ft. of 4-in. in Marsh court; 3 ft. of 1½ in. and 674 ft. of 6-in. in Middlesex street; 12 ft. of ¾-in. in Mt. Auburn street, corner of Putnam avenue; 155 ft. of 6-in. on premises of American

Rubber Works on Ninth street; 335 ft. of 6-in. in Park avenue; 3 ft. of 12-in. in Pleasant street at Green street; 3 ft. of 1½-in. and 154½ ft. of 6 in. in Portland and Albany streets; 24 ft. of 6-in., 4 ft. of 10-in. and 1,073 ft. of 12-in. in Portland street, between Cambridge and Spring streets; 172 ft. of 6-in. in Regent street; 12½ ft. of 6-in. in Rice street; 3 ft. of 1½-in., 49 ft. of 4-in. and 134 ft. of 6-in. in Richdale avenue; 3 in. of 1½ and 883 ft. of 4-in. in Sargent street; 516 ft. of 6-in. in Second street (renewal); 60 ft. of 8-in. in Sixth street, at Broadway; 238 ft. of 6-in. in Sixth street; 60 ft. of 6-in. in Smart street; 91 ft. of 4-in. in Springfield street; 7 ft. of 6-in. in Walden street; 7 ft. of 6-in. in Walden street, cor. Mead street; 81½ ft. of 6-in. in Woodlawn avenue.

The pipes in Allston street, Clinton street, Daniels' court and Second street have been renewed and enlarged. In Washington street the pipe was lowered, and in Albany street and Blanche street raised to accommodate the Sewer Department; in Putnam avenue the pipe was raised to new grade; and in Banks street the pipe was moved south, on account of new line of street.

NEW SUPPLIES.

Four hundred and twenty-eight new supplies have been laid, making a total of 10,158. Twenty-seven supplies have been renewed, of which six were enlarged. Two supplies have been extended. Thirty-one old supplies have been furnished with sidewalk shut-offs. Supplies in the following streets have been connected with the new main pipes: Allston street, Clinton street, Daniels' court, and Second street.

LEAKAGE.

Four hundred and ninety-one leaks have been stopped, namely: Two on 3-inch main, ten on 4-inch main, two on 4-inch joint, five on 6-inch main, one on 6-inch joint, one on 8-inch joint, two on 10-inch main, one on 12-inch main, one on 16-inch main, one on 30-inch main at Loafers' Bridge, Waltham, two at the reservoir, in the banks, sixteen on supplies in street, and four hundred and forty-seven on premises. Of these, four hundred and thirty-four on premises, which were reported by

inspectors while canvassing, were repaired by owners or occupants.

A general inspection of pipes and fixtures has been made by the inspectors.

DRINKING FOUNTAINS.

The number of drinking fountains at this date is sixteen.

The stone drinking-trough, formerly in Lechmere square, is now located in North avenue, in front of Igo's, in place of old fountain and trough removed.

A new cast-iron fountain, of Jenks' make, the bowl of which has a capacity of about one hundred gallons, into which the water runs continually, has been set in the centre of Lechmere square.

The drinking trough at Brewer's, in Brattle square, has been removed; the drinking fountain still remains where located.

A new granite drinking fountain, which was presented to the city, has been set at junction of Craigie and Brattle streets.

By order of the City Government, the fountains in the following locations are to be kept running during the winter: Lechmere square, Inman square, Brattle square, Central square, North avenue at Igo's, and at junction of Main street and Broadway.

The location of the fountain at Brattle and Mt. Auburn streets has been changed to the corner of Mt. Auburn street and Coolidge avenue.

STANDPIPES FOR STREET-WATERING.

There has been no addition made to the number of standpipes. Two have been re-arranged, and furnished with Chapman valves for the accommodation of the Street Department.

GATES.

All the gates have been inspected, and put into good condition.

BOXES.

Sixteen hydrant, thirty-four iron and thirty-nine wooden, boxes have been set in place of worthless ones removed.

HYDRANTS.

Forty-one hydrants have been set during the year. Forty of these were of the Chapman Valve Company's make, and one of R. D. Wood & Co.'s. Ten hydrants have been removed, of which six were flush and four post, making the number now in use 648.

The hydrants removed were located as follows: Flush hydrants from North avenue and Rice street, Walden and Dublin streets, Walden and Mead streets, Dublin and Walden streets, Second and Cambridge streets, and Second and Otis streets.

A Chapman post hydrant on Murray street, broken by a team of West End street Railway Company, and a Perkins' post hydrant on Prison Point street, found broken by inspector, have been replaced by Chapman posts. An R. D. Wood & Company's three-nozzle post hydrant, removed from LaFayette square, has been located in Albany street. A post hydrant has been replaced by a Chapman post in Franklin street, at Bay street.

Of the hydrants set, two were on private premises, namely: Street Department on Tremont street, and American Rubber Company, on Ninth street.

The following hydrants are located on private premises:

Location.	Post.	Flush.
American Rubber Company	1	
Boston and Maine Railroad	3	4
Boston Rubber Works	1	
Boston Woven Hose Company	1	
Houghton & Company	2	2
North & Company	1	
Page, George G., and Company	1	
Street Department, Tremont street	1	
West End Street Railway Company	1	
Total	12	6

STREET RESERVOIRS.

The number of street reservoirs now in use is eight.

METERS.

The number of meters in use at this date is two hundred and thirty-one.

LIST OF METERS IN USE NOV. 30, 1889.

METERS.	LOCATION.	SIZE. INCH.	KIND.
Alghieri, Simon	Main st	¾	Worthington.
American Rubber Co	Ninth st	4	Union.
American Net and Twine Co	Third st	2	Worthington.
Andrews, D. H	Ninth st	1½	Union.
Andrews, Dr. R. R	Harvard st	⅝	"
Babb & Co., A	Columbia st	1	Worthington.
Barbour, W. O	Osborn st	1	"
" " "	" "	⅝	"
Bay State Brick Co	Spruce st	1	"
Bird, H. M	Broadway	⅝	Union.
Blake, George F., Manufacturing Co.	Third st	2	Crown.
" " " " "	Binney st	2	Union.
Blake, Irving	Church st	1	Worthington.
" "	" "	1	Crown.
B. & M. R. R. New Round House	Prison Point st	3	Union.
" " " Repair Shops	Bridge st	2	Worthington.
" " " Round-House	Prison Point st	2	"
" " " " "	" " "	2	"
" " " Paint Shop	" " "	1	"
" " " Car House	" " "	2	"
" " " Filling Locomotives	" " "	6	Union.
" " "	" " "	1	Crown.
Boston Ice Company	" " "	2	Union.
Boston Woven Hose Co	Hampshire st	4	Worthington.
" " " "	Berkshire st	⅝	Crown.
Boston Stamping Co	Third st	1½	Union.
Bowman, Henry	Frank st	1	Worthington.
Bragdon & Cooper	" "	⅝	"
Bullock, O. S.	Broadway	¾	"
Burton, A. & E	Harvard st	¾	"
Cambridge Electric Light Co	Albro st	4	"
Cambridge Gas Light Co	Third st	2	"
" " " "	" "	1	"
" " " "	Ash st	¾	"
Cambridgeport Diary Co	Magazine st	1	"
" " "	Blackstone st	1½	Union.
Cambridge Hospital	Mt. Auburn st	1½	Crown.
Cambridge Y. M. C. A	Main street	2	Worthington.
Campbell, Wm. & Co	Osborn st	2	"
Carr Brothers	Lopez st	1	"
Catholic Young Men's Gymnasium	Prospect st	⅝	"
City of Cambridge. Webster School.	Upton st	2	"
" " " Latin School	Lee st	1	"
" " " Ward 1 Building	Brattle st	1½	"
" " " Ward 4 Building	Central sq	1½	"
" " " Cemetery	Coolidge ave	4	"
" " " Fountain, near B. & L. R. R.			
Chadwick Lead Works	North ave	⅝	Union.
Chelmsford Iron Foundry	North st	1	"
Childs & Co	Bridge st	¾	Worthington.
Clark B. P. & Co	Main and Osborn sts	¾	Union.
Close, George	Main st	1½	Worthington.
Cochrane Chemical Co	Broadway	1	"
Cofran, N. M	Potter st	1	"
Coleman Brothers	Concord ave	1½	Union.
Coolidge & Caswell	Broadway	1	Worthington.
Coolidge, J. G. Barn	Franklin st	2	Union.
" " Greenhouse	Coolidge ave	2	Worthington.
Cushman Brothers & Co	" "	1	"
Dailey, C. W	Blanche st	¾	"
Damon Safe & Iron Works Co	Cambridge st	1	"
" " " " "	Main st	1	"
Daniels, Badger & Co	" "	2	Union.
Davenport, A. H	Albany st	2	Crown.
" "	Cambridge st	2	Worthington.
Davis, Curtis & Co	Otis st	⅝	Crown.
Davis, J. C. & Co	Broadway	2	Worthington.
Day Cordage Co	"	2	Crown.
Dee, T. W	Rogers st	2	"
Derby, H	Brattle st	2	Union.
Dolan, John	Main st	1	Crown.
Dover Stamping Co	Decatur st	⅝	"
	Pleasant st	6	Union.

LIST OF METERS IN USE NOV. 30, 1889 (*Continued*).

METERS.	LOCATION.	SIZE. INCH.	KIND.
Dow, Davis & Co	Portland st	2	Crown.
Dow, W. L. W	Deacon st	1	Worthington.
Downing, Theo	Eustis ct	1	"
Doyle, Wm. E	Cambridge st	2	"
Durite Manufacturing Co	Tannery st	2	Union.
Draper, Francis & Co	Otis st	5/8	Worthington.
East Cambridge Club Stable	First st	1	"
Episcopal Seminary	Brattle st	1 1/2	"
Fairbanks, Mrs. N. J	Norfolk st	1	"
Furfey, James	Brookline st	3/4	"
Gilmore & Eustis	Portland st	2	"
Goepper Brothers	Ninth st	1 1/2	"
" "	Spring st	2	"
Gwynne & Co	Brattle st	1	Crown.
Harvard College. Boat-house	DeWolf st	1	Union.
" " Botanic Gardens	Garden st	1	Crown.
" " Boylston Hall	College grounds	2	"
" " Holmes Field	North ave	2	Union.
" " " "	Kirkland st	6	"
" " Holworthy Hall	College grounds	5/8	Worthington.
" " Holyoke House	Harvard st	2	"
" " In Yard	College grounds	1 1/2	"
" " Gore Hall	" "	1	"
" " Jarvis Field	Everett st	1 1/2	"
" " " "	" "	5/8	"
" " Memorial Hall	Cambridge st	2	"
" " Museum	Divinity ave	1	"
" " Thayer Hall	College grounds	1 1/2	"
" " University Hall	" "	2	Union.
" " Sever Hall	" "	3/4	Crown.
" " Stoughton	" "	3/4	Worthington.
Harvard Piano Co	Main st	3/4	Union.
Hawkins Machine Co	First st	1	Worthington.
Hazen, D. M	Elm st	1	"
Hewes, A. H. & Co	Crescent ave	1	"
Hersey, Ira G	Broadway	1 1/2	"
Hilton, J. M	Harvard st	1 1/2	"
Holt & Bugbee	East st	3/4	"
Holton, F. H. & Co	Harvard st	2	"
Horgan, John	Main st	3/4	Crown.
Houghton, H. O. & Co	Blackstone st	2	Worthington.
" " "	" "	5/8	Crown.
Howe & Putney	Distillhouse st	2	"
Ivers & Pond. No. 1	Maine and Albany sts	2	Worthington.
" " No. 2	Albany st	2	Crown.
" " Engine-room	" "	2	Union.
Irving & Casson	Otis st	1	Worthington.
Jackson, B. D	96 Putnam ave	5/8	Crown.
Jones, C. L. & Co	Pearl st	3/4	Ball & Fitts.
Keeler & Co	Thorndike st	2	Union.
Kelley, James	North st	1	Worthington.
Kemp, Lysander & Sons	Davis st	1	"
Kendall & Sons. Engine-room	Main st	3/4	"
" " " Machine-shop	" "	5/8	"
" " " Boiler-shop	" "	1	"
Kennedy, F. A. & Co	Green st	3	"
" " "	Franklin st	1 1/2	Union.
Kennedy, Mrs. A	Farwell pl	1	Worthington.
Lamb & Ritchie	Albany st	1	Crown.
Linehan, Charles	Bridge st	1	"
Little, Brown & Co	Blackstone st	5/8	Thompson.
Low, J. W	Reed st	1 1/2	Worthington.
Mason & Hamlin	Broadway	1 1/2	Crown.
Maverick Oil Works	Sixth st	2	Worthington.
Middlesex County House of Correction	Second st	2	"
" " " " "	Spring st	4	Union.
" " Court House	Otis st	5/8	Worthington.
" " " "	Thorndike st	1	"
" " Registry of Deeds	Otis st	1 1/2	"
Middlesex Dye Works	Sacramento st	1	"
Millan, Alexander	Brattle st	5/8	Crown.
Miller & Shaw	Broadway	1	Worthington.
Miller & Sons	Gore st	3/4	Frost.

LIST OF METERS IN USE NOV. 30, 1889 (*Continued*).

METERS.	LOCATION.	SIZE. INCH.	KIND.
Moring, Mrs. A. L	Main st	1	Worthington.
Morrill & Allen	" "	¾	Crown.
Morss & Whyte	Auburn st	4	"
Moulton, C. W. H	Gore st	⅝	Union.
Mt. Auburn Corp. Greenhouse	Brattle st	1	Worthington.
" " " Cemetery	Mt. Auburn st	⅝	Desper.
Murdock, Walter H	Griggs st	⅝	Ball & Fitts.
National Linseed Oil Co	Fifth st	1	Worthington.
Norton, E. H	Windsor st	¾	"
" " "	Distillhouse st	1	"
O'Brien, John F	Coolidge ave	¾	"
" " " Ross House	Broadway	⅝	"
Orr, Rev. Wm	Arrow st	1	"
Page, Carlos & Co	Broadway	1½	Union.
Page, George G. Box Co	Hampshire st	4	"
" " " " "	" "	2	Worthington.
Parry Bros. & Co	Raymond st	¾	"
Phillips, George S	Main st	¾	"
Pike, O. A	North ave	1	"
Place, Charles	Norfolk st	¾	"
Porcellian Club	Harvard st	¾	Crown.
Purcell, H	Main st	⅝	Worthington.
Rawson & Morrison	Main st	¾	Union.
Reardon's, John, Sons & Co	Waverley st	4	Worthington.
Revere Sugar Refinery	Water st	3	"
" " "	" "	3	Union.
Reversible Collar Co	Mt. Auburn st	1	Worthington.
Rideout, M. E	State st	1	"
Roberts Iron Works Co	Main st	1½	Crown.
Roberts, O. P	Brattle st	1	Worthington.
Rogers, heirs of George M	Washington st	3	"
Rutherford, R. J	First st	1	Crown.
Salvation Army	Prospect st	¾	Worthington.
Saurman, B. F	Gore st	¾	Union.
Schaeffer Electric Light Co	Main st	¾	"
Shaw, A. B. & E. L	Otis st	¾	Worthington.
Shorey, George L	Kinnaird st	4	Union.
Smart, D. C	Main st	2	Worthington.
Spaulding Cable Works	" "	⅝	Union.
Spear's, Alden, Sons & Co	Rogers st	1½	Worthington.
Squire, John P. & Co	Gore st	1	"
" " " "	" "	2	"
" " " "	" "	4	Union.
" " " "	" "	6	Gem.
Sortwell & Co	Distillhouse st	2	Worthington.
St. Mary's Church	Norfolk st	2	"
Storr, D. C. Furniture Co	Thorndike st	¾	"
" " " "	First and Thorndike sts.	⅝	Union.
Teele, Frank H	Lincoln ct	¾	Worthington
Thayer, Henry & Co	Broadway	2	"
Thurston, Hall & Co	Elm st	1	"
Tower, Sylvester	Broadway	2	"
Tracy, M. F	Boylston st	1	Desper.
Underhill & Anderson	First st	1½	Worthington.
" " "	First and Thorndike sts.	2	Union.
Union Glass Company	Webster ave	⅝	Worthington.
" " "	" "	¾	"
Union Pacific Tea Co	Main st	¾	Union.
Warren, J. H. Felton Hall	Cambridge st	1	Worthington.
W. E. St. Railway Co., Car-house	Camb. and Baldwin sts.	1	Balance Valve.
" " " " " "	Dunster st	¾	Worthington.
" " " " Office	Harvard sq	¾	Crown.
" " " " Paint-shop	Dunster st	1	Worthington.
" " " " Repair-shop	" "	1	"
" " " " Stable	Brookline st	1	"
" " " " "	Dunster st	1	"
" " " " "	" "	¾	Hersey.
" " " " "	Murray st	1½	Worthington.
" " " " "	Baldwin st	1	"
" " " " "	Cambridge st	1	"
" " " " "	" "	1	"
" " " " "	Mt. Auburn st	2	Crown.
" " " " "	North avenue	2	Worthington.

LIST OF METERS IN USE NOV. 30, 1889 (*Continued*).

METERS.	LOCATION.	SIZE. INCH.	KIND.
W. E. St. Railway Co. Stable	Main st	2	Worthington.
" " " " "	River st	1	"
" " " " Waiting-room	Bridge st	5/8	"
" " " " "	Main st	5/8	Union.
" " " " Washing cars.	Murray st	1 1/2	Crown.
" " " " " "	" "	1	Worthington.
Wight & Scorgie	Mt. Auburn st	5/8	Crown.
Wilkins, William	Earl st	1	"
Wilson, John & Sons	Brattle st	1	Union.
Whitney, H. W	Main st	5/8	Crown.
Woods, John M	Bridge st	1 1/2	Worthington.
Young, C. F	Davis st	3/4	Union.
Zerega, J. F	State st	5/8	Worthington.

LIST OF DRINKING FOUNTAINS, NOV. 30, 1889.

Brattle street, junction of Craigie street.
Brattle street, east side at Brewer's Block.
Bridge street, junction of Cambridge street.
Broadway, corner of Norfolk street.
Central square, east side.
Central square, west side.
Garden street, at Washington Elm.
Hampshire street, junction of Broadway.
Harvard square, at the flag-staff.
Inman square, east side.
Main street, junction of Broadway.
Main street, junction of Mt. Auburn street.
Mt. Auburn street, corner Coolidge avenue.
North avenue, at Igo's.
North avenue, corner of Walden street.
Putnam avenue, corner of Brookline street.

LIST OF STAND-PIPES FOR STREET WATERING, NOV. 30, 1889.

Brattle street, near University Press.
Brattle street, corner of Sparks street.
Brattle street, near Fayerweather street.
Brattle street, near Fresh Pond lane.
Bridge street, junction of Cambridge street.
Broadway, near Third street.
Broadway, corner of Sixth street.
Broadway, corner of Winsor street.
Broadway, junction of Hampshire street.
Brookline, corner of Putnam avenue.
Cambridge and Baldwin streets.
Cambridge street, near Warren street.
Cambridge street, near Winsor street.
Cambridge street, at Inman square.
Columbia street, near Austin street.
Concord avenue, near Wyeth street.
Coolidge avenue, opposite entrance to Mount Auburn Cemetery.

Dana street, corner Chatham street.
Fresh Pond avenue, opposite Vassal lane.
Gore street, west of Third street.
Green street, near Western avenue.
Garden street, near Chauncy street.
Harvard street, corner of Prescott street.
Inman street, near Broadway.
Kirkland street, near Quincy street.
Main street, near Portland street.
Main street, near Hancock street.
Magazine street, opposite Warland street.
Mount Auburn street, near Athens street.
Mount Auburn street, near Willard street.
Mount Auburn street, corner of Coolidge avenue.
North avenue, near Common.
North avenue, corner Sacramento street.
North avenue, near Roseland street.
North avenue, near Beech street.
North avenue, near Spruce street.
North avenue, corner Norris street.
North avenue, opposite Tannery street.
Prison Point street, opposite Round House.
River street, near Putnam avenue.
Sixth street, near Thorndike street.
Spruce street, corner Cedar street.
Third street, near Rogers street.
Thorndike street, near Third street.
Western avenue, corner Howard street.
Walden street, corner Mount Pleasant street.
Washington avenue, near Lambert avenue.

MAIN PIPE LAID, NUMBER OF GATES AND FIRE HYDRANTS.

Location.	Iron Pipe.		Gates.		Hydrants.	
	Length.	Size.	No.	Size.	No.	Size.
	Feet.	Inch.		Inch.		Inch.
Albany street	10	6	–	–	1	6
Albany street	44	8	–	–	–	–
Athens court	122½	2	–	–	–	–
Auburn place	3	1½	–	–	–	–
Auburn place	662½	6	1	6	1	6
Auburn and Sidney streets.	171	4	1	4	–	–
Bellevue avenue	3	1½	–	–	–	–
Bellevue avenue	197	4	1	4	1	6
Bellevue avenue	5	6	–	–	–	–
Belmont street	3	1½	–	–	–	–
Belmont street	233	6	1	6	–	–
Binney street	3	1½	–	–	–	–
Binney street	165½	6	1	6	–	–
Binney and Third streets	279	6	1	6	1	6
Blackstone street court	110	2	–	–	–	–
Blanche street	34	4	–	–	–	–
Cambridge and Harding sts.	11	6	1	6	–	–
Cambridge and Harding sts.	2	8	1	8	–	–
Carlisle street	36	4	–	–	–	–
Channing street	217	4	–	–	–	–
Channing street	8	6	–	–	1	6
Clay street	60	6	–	–	–	–
Clinton street	6	¾	–	–	–	–
Clinton street	917	6	2	6	1	6
Clinton street	2	8	–	–	–	–
Columbia street	75	4	–	–	–	–
Cottage Park avenue	114	1¼	–	–	–	–
Cottage Park avenue	46	4	1	4	–	–
Creighton street	120	6	–	–	–	–
Crescent street	48	6	–	–	–	–
Cushing street	97½	6	–	–	–	–
Daniels court	3	1½	–	–	–	–
Daniels court	170	4	1	4	–	–
Dublin street	6	1½	–	–	–	–
Dublin street	205½	6	–	–	1	6
Dudley street	2	1½	–	–	–	–
Dudley street	209	6	1	6	–	–
Eighth street	5	6	–	–	1	6
Elmwood avenue	3	12	1	12	–	–
Emery court	121½	4	1	4	–	–
Francis avenue	84	4	–	–	–	–
Francis avenue	5	6	–	–	1	6
Franklin and Bay streets	2	6	–	–	1	6
Front street	60	6	–	–	–	–
Hampshire and Bristol sts	6	6	–	–	1	6
Hampshire and Elm streets	2	3	1	3	–	–
Hampshire and Elm streets.	12	6	–	–	1	6
Harvey street	60	6	–	–	–	–
Holly avenue	39	4	–	–	–	–
Holmes Field	338	4	2	4	–	–
Holmes Field	745	6	1	6	2	6
Howard street	15	6	–	–	2	6
Howland street	3	1½	–	–	–	–
Howland street	131	4	1	4	–	–
Huron street	201½	4	–	–	–	–
Irving street	191	6	1	6	1	6
Irving street	761	8	1	8	1	6
Kinnaird street	22	6	–	–	2	6
Lambert avenue	714	6	1	6	2	6
Lexington avenue	3½	1½	–	–	–	–
Lexington avenue	191½	6	1	6	1	6
Madison street	113	4	1	4	–	–
Magee street	48	4	–	–	–	–
Marsh court	3	1½	–	–	–	–
Marsh court	126	4	–	–	–	–
Middlesex street	3	1½	–	–	–	–
Middlesex street	674	6	1	6	1	6
Mt. Auburn st. & Putnam av.	12	¾	–	–	–	–
Murray street	–	–	–	–	1	6

MAIN PIPE LAID, NUMBER OF GATES AND FIRE HYDRANTS.

Location.	Iron Pipe.		Gates.		Hydrants.	
	Length.	Size.	No.	Size.	No.	Size.
		Inch.		Inch.		Inch.
Ninth street	155	6	-	-	1	6
Park avenue	335	6	1	6	1	6
Pleasant and Green streets	3	12	1	12	-	-
Portland street	24	6	-	-	1	6
Portland and Cambridge sts.	4	10	-	-	1	6
Portland and Thorndike sts.	1073	12	2	12	1	6
Portland and Spring streets.	-	-	-	-	1	6
Portland and Albany streets.	3	1½	-	-	-	-
Portland and Albany streets.	154½	6	1	6	-	-
Prison Point street	-	-	-	-	1	6
Regent street	172	6	-	-	-	-
Rice street	12½	6	-	-	1	6
Richdale avenue	3	1½	-	-	-	-
Richdale avenue	49	4	-	-	-	-
Richdale avenue	134	6	1	6	-	-
Sargent street	3	1½	-	-	-	-
Sargent street	883	4	2	4	1	6
Second and Charles streets	6	6	-	-	1	6
Second street	510	6	-	-	2	6
Sixth street	238	6	-	-	1	6
Sixth street at Broadway	60	8	2	8	-	-
Smart street	60	6	-	-	-	-
Springfield street	91	4	-	-	-	-
Tremont street	-	-	-	-	1	6
Walden street	7	6	-	-	1	6
Walden and Mead streets	7	6	-	-	1	6
Woodlawn avenue	81½	6	-	-	-	-

RECAPITULATION.

	12 in.	10 in.	8 in.	6 in.	4 in.	3 in.	2 in.	1½ in.	1¼ in.	¾ in.	Total.
Length in feet of iron pipe	1,079	4	869	6,203	3,001	2	232½	44½	114	18	11,567
Length in feet of iron pipe (renewals)	-	-	-	1,427	340	-	-	-	-	-	1,767
Number of gates	4	-	4	16	11	1	-	-	-	-	36
Number of hydrants	-	-	-	41	-	-	-	-	-	-	41

NEW SUPPLIES.

	6 in.	4 in.	2 in.	1½ in.	1¼ in.	1 in.	¾ in.	Total
Length in feet of pipe	134½	147	885	244	867	3,797	10,605½	16,680
Number of supplies	3	2	12	6	21	83	301	428
Number of stop and waste cocks	-	-	1	1	1	5	31	39
Number of drip valves	-	-	8	5	25	81	266	385
Number of screw cocks	-	-	16	6	23	81	293	419
Number of sidewalk cocks	-	-	-	-	-	85	293	378
Number of service boxes	-	-	-	-	-	-	387	387
Number of boxes, frames, and covers	-	-	-	-	-	-	46	46

LIST OF CHECK-VALVES.

Old High-Service.

	Size in Inches.
Lake View avenue, 150 feet north from Huron street	10
Lake View avenue, 150 feet north from Brattle street	6
Fayerweather and Reservoir streets	6
Concord avenue, 135 feet south from Buckingham street	6
Garden and Linnæan streets	6
Raymond and Linnæan streets	6
Avon Hill and Linnæan streets	6
Arlington street, 230 feet west of North avenue	6
Mt. Vernon street, 100 feet west from North avenue	6
Mt. Pleasant street, 150 feet south from Walden street	6

New High-Service.

	Size in Inches.
Highland street, on old 12-inch main	12
Dana street and Broadway	4
Harvard street, near Hancock	6
Centre street, near Hancock	4
Dana street, near Main	4
Harvard and Ellery streets, two valves	6
Harvard and Trowbridge streets, two valves	4
Harvard and Ware streets	4
Harvard and Prescott streets	4
Quincy street, near Broadway	4
Broadway, on line of 6-inch pipe crossing College Grounds	6
Waterhouse street, near small common	6
Kirkland and Cambridge streets	10
Berkeley street, near Craigie	4
Appian Way, near Brattle street	4
Linnæan and Lancaster streets (old high-service extension)	6
Kirkland street and Frisbie place	4

STATEMENT OF STOCK ON HAND, NOV. 30, 1889.

Wrought Iron Fittings.

	6-in.	4-in.	3-in.	2½-in.	Total.
Caps	2	1	1		4
Couplings	2	2	4	2	10
Elbows	2	2	4	4	12
Nipples	2	8	7	4	21
Plugs				1	1
Valves				1	1

For Street Mains (Iron Pipes and Fittings).

	48 in.	36 in	30 in.	24 in.	20 in.	16 in.	12 in.	10 in.	8 in.	6 in.	4 in.	3 in
Bends			1	2	2		3	6	6	2	8	
Blow-off branches												
Caps							7	5	18	10	15	
Cast iron plugs					2							
Clamps for cement pipes					4						1	
Check-valves				2				1				
Clamp-sleeves				5	4							
" "				2-6	2-6	4	4	6	4	9	12	9
Clamp-sleeves for cement pipe (Hawkes)								6	8	7	3	
Crosses					1–20		5-4	7-6	3-4	8-6	14–4	2
"						3-6	4–12	4-8	4 8	8-4		
"						1–12		2–10				
Drain offsets										8		
Elbows				1		1	1	2	8	5	1	
Gates								2	1	6	10	1
Offsets								6		13	16	
Reducers					2-8		2-8	2-8				
"				1–12	2–12	1–16	10–6	1-6	4-6	10–4	6-3	
Sleeves			1	4	3	2	9	7	16	23	27	
Tees				3-6	2–20	1-6	3–12	7-6	12–8	13–6	20-4	2-3
"				1 8	2-6					7-4		
"				1–16	1–12							
"			1-6	1–20								
"				1–24								
Wooden plugs				2	2	1	3	5	13	31	20	3
Y. branches				1	1–12				4			
Pipe—12 feet lengths	2		1		15	5	110	100	76	120	367	

For Supplies (Galvanized Pipe and Brass Fittings).

	2-in.	1½-in.	1¼-in.	1-in.	¾-in.	½-in.	
Air chamber				45	98	32	
Bushings, different sizes						262	
Caps		5	16	15	17	37	
Chapman stop and waste valves	14	17	11	23	24		
Check valves	1	1	1	4	3		
Couplings	55	98	16	44	135	15	
Crosses	4	5	16	4	12		
Driving-cocks bushed and threaded				8	1		
Elbows	20	24	30	38	91	5 and 5	¾x½
Faucets				12	12	12	
Fountain cocks					6		
Gates	2						
Hose nipples					28		
Hydrant cocks		27		6	8		
Lead connections			1	14	10		
Lead connection unions					36		
Nipples	115	140	77	206	120		
Pipe, galvanized, in feet	954	1026	481	432	561		
Plugs	18	18	18	18	19	2	
Self-closing fountain faucets						6	
Screw-cocks for cement pipe		4		20			
" "	7	35	9	9	44		
Sidewalk cocks				5	55		
Sill cocks					8		
Sill valves, nickel plated					6		
Street elbows				12	24		
Stop and waste cocks	8	10		8	6		
Tees	4	3	14	28	81	40	
"	25–1	24–¾	40–¾	32–¾	40–½		
Unions	55	20	6	55	57	3	
Reducing couplings, different sizes						100	
Socket end of rods						17	
Stand-pipes						100	

STOCK IN SHOP AND YARD.

1 ⅝-inch Worthington meter.
1 ¾-inch Worthington meter.
3 1-inch Worthington meters.
1 1½-inch Worthington meter.
3 ⅝-inch Union Rotary meters.
2 1½-inch Union Rotary meters.
1 2-inch Union Rotary meter.
1 ⅝-inch Crown meter.
1 4-inch Crown meter.
1 ⅝-inch Ball and Fitts meter.
1 ¾-inch Frost meter.
1 3-inch Frost meter.
14 pipe wrenches.
2 nut wrenches.
7 monkey-wrenches.
10 gate wrenches.
5 blow-off wrenches.
3 1-inch cock wrenches.
4 2-inch cock wrenches.
22 small tee wrenches.
4 flush hydrant wrenches.
1 meter box.
11 iron boxes.
2 hydrant boxes.
3 cock boxes.
40 wooden gate boxes.
54 large frames and covers for gates.
12 small frames and covers for gates.
36 large frames and covers for hydrants.
216 risers for wooden boxes.
370 seals.
1 stove with fixtures.
1 tank for measuring water.
1 work bench.
1 work bench with drawers.
1 clock.
6 chairs.
30 lanterns.
4 tool bags.
2 trowels.
2 hay forks.
1 rake.
2 ladders.
2 barrels charcoal.
1 barrel clay.
3 casks cement.
3 hydrant valves.
25 stops and wastes for flush hydrants.
7 hydrant bodies.
15 post hydrant jackets.
26 post hydrant rods.
1 set hydrant tools.
2 1-inch garden hydrants.
4 lead kettles.
3 ladles.
200 lbs. lead pipe.
1,500 lbs. lead.
30 lbs. packing.
2 diaphragm pumps with hose.
2 hand pumps.
7 thawing out pumps.
450 thawing out pipes.
1 ratchet for tapping main pipe.
3 machines for tapping cement pipe.
1 drilling machine with drills complete.
2 tapping machines for supplies, with taps and drills.
4 hooks for tapping main pipe.
2 2-inch taps and drills.
1 threading machine with dies.
10 plates with dies.
20 lbs. sheet rubber packing.
1½ cords wood.
Lot of skid timber.
Lot of 4-inch lumber.
150 feet of cypress.
Lot of blocks and wedges.
Lot of counters and ratchets.
Lot of old junk.
5 drinking fountains.
2 hatchets.
2 axes.
1 hay cutter.
1 claw-hammer.
6 sledge hammers.
2 paving hammers.
3 hand hammers.
8 screw drivers.
4 saws.
Plane, square, level, etc., for carpentering.
1 lathe, with usual chucks and tools.
1 water motor.
Lot of block stones.
4 wooden horses.
3 oil cans.
1 tool chest.
11 pails.
6 iron bars.
4 tamping bars.
1 chain tongs.
1 washer cutter.
2 platform scales.
2 grindstones.
3 bench vises.
3 furnaces.
2 hoes.
2 small derricks.
2 breast derricks.
3 pair rubber boots.
9 pipe cutters.
6 pipe tongs.
1 floating hook.
1 large mall.
9 spindles for 4-inch and 6-inch gates.
2 sets main pipe tools.
1 30-inch overflow bell.
9 chains.
36 shovels.
3 snow shovels.
32 picks.
9 trench rammers.

2 paving rammers.
2 elevating screws.
5 small oilers.
1 sand sieve.
1 thawing boiler and furnace.
13 shut-off rods.
13 2-inch offsets.
150 feet 2½-inch hose.
4 rope tackles.
1 blow-off hose.
150 feet ¾-inch hose.
4 horses.
1 truck.
3 wagons.
4 harnesses.
2 sleighs.
7 blankets.
2 buffalo robes.
3 lap robes.
3 oil coverings for horses.
1 carry-all.
2 buggies.
1 robe chest.
Lot of meter clocks.
2 paving heaters.
Lot of 2-inch sheet piling.
2 ropes.
2 double-runner sleds.

TOOLS AT FRESH POND.

BRICK HOUSE STABLE, CONCORD AVENUE.

1 horse.
1 harness.
1 cart.
2 blankets.
1 hay-rack.
1 curry-comb.
1 brush.
1 card.
6 forks.
6 rakes.
1 shovel.
1 hand force-pump.
50 feet of rope.
3 pails.
1 grain chest and measures.
1 oil covering for horse.
1 harrow.
15 tons hay.

STOREHOUSE — BLACK ESTATE.

1 mowing machine.
2 scythes.
2 scythe snaths.
1 handsaw.
1 watering cart.
1 road roller.
5 wheelbarrows.
1 ton second crop hay.
1 grindstone.

ON THE WORKS — FRESH POND.

2 tool chests.
1 stone boat.
3 plows.
1 iron scraper.
12 round painted picks.
5 chisel painted picks.
7 chains.
3 bars.
1 sod cutter.
40 shovels.
1 screen.
3 axes.
1 sledge.
2 iron wedges.
4 grub hoes.
2 paving hammers.
2 rammers.
2 levels.
1 monkey wrench.
1 hand hammer.
3 water pails.

FOUNTAIN — GATE HOUSE.

4 hoes.
6 gravel rakes.
3 shovels.
1 small skiff, with oars.
3 pails.
1 keg wire nails.

TOOLS AT STONY BROOK.

1 row-boat and oars.
3 gate wrenches.
2 pair grab hooks.
1 rope fall.
1 chain fall.
40 feet of rope.
1 ladder.
2 chairs.
1 sprinkling can.
1 reamer.
1 whipple-tree and traces.
1 drag.
3 rakes.
1 fork.
2 scythes and snath.
2 whet-stones.
1 sod knife.
2 lanterns.
1 stove and fixtures.
17 cast-iron signs.
1 monkey-wrench.
1 cold chisel.
1 grindstone.
2 shovels.
3 picks.
1 iron bar.
1 oil can.
1 oiler.
1 lead kettle.
1 ladle.
1 tip cart.
2 lengths 36-inch pipe.
12 lengths 30-inch pipe.
2 30-inch sleeves.
2 pike poles.
1 sickle.

REPORT

OF THE

ENGINEER OF PUMPING STATION.

Pumping Station, Cambridge Water Works,
Dec. 6, 1889.

Hiram Nevons, Esq., Superintendent: —

Sir: The machinery at the pumping station is in good condition. Engine No. 2, which, at the date of last report, had been just started, has pumped the larger part of the water used during the past year, and has continued to work very satisfactorily.

The board having voted to change engine No. 1, in the same manner as was done with engine No. 2, a contract was made with the George F. Blake Manufacturing Company, they being the lowest bidders, and the contractors are now at work on the engine.

An independent air pump and condenser has been attached to the high-service engine, enabling that engine to be run after the other engines are stopped.

After careful investigation of the matter of lighting the pumping station by electricity, it was decided to accept the proposition made by Mr. George E. Bowers, of Fitchburg, Mass., to furnish dynamo, storage battery, thirty incandescent lamps, and one arc lamp, and to install the same in first-class manner. The plant has been in operation since July, and has given perfect satisfaction.

Following will be found a statement of the expenses at the pumping station, with the usual tables.

Respectfully submitted,

EDWIN C. BROOKS,

Engineer.

STATEMENT.

$968\frac{1183}{2240}$ tons Cumberland coal at $4.56	$4,416 48
$83\frac{1380}{2240}$ tons Cumberland coal at $4.72	394 67
Oil, waste, packing, etc.	314 19
Repairs on engines and boilers	127 33
Repairs on buildings and care of grounds	99 31
Tools	40 02
Electric light plant	512 61
Gas	187 60
Salaries	5,452 50
Total	$11,544 71

ENGINE RECORD, POND LEVELS, AND RAINFALL.

Date.	Low Service Engines. No. 1. Total Pumping Time.		Low Service Engines. No. 1. Water Pumped. Gallons.	Low Service Engines. No. 2. Total Pumping Time.		Low Service Engines. No. 2. Water Pumped. Gallons.	High Service Engine. Total Pumping Time.		High Service Engine. Water Pumped. Gallons.	Total Water Pumped. Gallons.	Daily Average Water Pumped Gallons.	Total Coal Consumed. Lbs.	Daily Average Coal Consumed Lbs.	Average Height of Pond. Ft.	Rainfall. In.
	Hrs.	Min		Hrs.	Min		Hrs.	Min							
1888.															
December	340	25	78,665,700	91	25	34,205,600	431	50	9,653,088	122,524,388	3,952,400	200,300	6,461	15.94	6.67
1889.															
January	397	15	93,776,400	39	40	14,867,600	436	55	9,947,789	118,591,789	3,825,542	196,300	6,332	16.30	6.64
February	226	30	52,698,000	151	25	60,601,750	377	55	8,218,483	121,518,233	4,339,937	190,900	6,818	15.78	2.81
March	286	50	65,047,200	115	30	45,569,600	402	20	8,753,414	120,370,214	3,882,910	186,300	6,010	15.82	3.29
April	284	00	65,336,400	104	30	43,136,500	388	30	9,032,813	117,505,713	3,916,857	181,900	6,063	15.97	3.73
May	209	45	46,869,600	185	25	74,704,850	446	00	11,527,891	133,102,341	4,293,834	201,400	6,497	15.98	5.65
June	118	35	27,603,900	252	45	98,022,100	444	20	10,720,742	136,346,742	4,544,891	195,700	6,520	16.23	3.44
July	81	35	17,568,300	287	50	108,728,400	461	15	11,483,328	137,780,028	4,444,517	204,200	6,587	15.57	8.53
August	8	45	1,893,900	334	20	122,766,600	461	00	11,259,110	135,919,610	4,384,504	203,900	6,577	16.01	3.78
September	1	30	325,800	323	10	120,107,350	444	30	11,890,547	131,323,697	4,377,456	199,100	6,637	14.79	5.30
October	28	00	5,725,800	305	35	113,219,150	496	00	12,224,909	131,169,859	4,231,282	209,500	6,758	14.04	3.73
November	3	15	679,200	294	30	108,040,900	480	00	11,566,291	120,286,391	4,009,546	187,300	6,243	15.10	6.51
Total	1,986	25	456,190,200	2,486	05	944,970,400	5,270	35	125,278,405	1,526,439,005		2,356,800			60.08
Daily Average	5	27	1,249,836	6	49	2,588,960	14	26	343,229	4,182,025				15.63	

STOCK ON HAND, DEC. 1, 1889.

940 tons Cumberland coal, 10 gallons cylinder oil, 23 gallons engine oil, 23 gallons kerosene oil, 5 lbs. tallow, 140 lbs. cotton waste, 72 lbs. rubber packing, 80 lbs. Usidurian packing, 10 lbs. square flax packing, 38 manhole gaskets, 26 handhole gaskets, 2 steam gauges, 10 lbs. soap, 4 brooms, 125 fire brick, 2 bbls. brimstone, 300 lbs. bolts and nuts, 1 lot iron pipe, 1 lot pipe fittings.

TOOLS, FURNITURE, AND INSTRUMENTS.

1 18-in. x 10-ft. engine lathe, with chucks, tools, etc., 1 5-in. x 6-in. engine, 1 lot shafting, pulleys, and belting, 1 grindstone, 2 vises, 2 vise benches, 3 die plates and dies, 1 set pipe taps, 1 set hand taps, 2 pipe cutters, 14 pairs pipe tongs, 3 hand hammers, 1 copper hammer, 18 cold chisels, 1 hand bellows, 15 files, 6 screw wrenches, 5 Stillson wrenches, 2 clamp screws, 1 sledge, 2 ratchets, 24 drills, 1 breast drill, 2 jack screws, 6 steel bars, 2 soldering irons, 4 cylinder-head cranes, 12 eye-bolts, 75 starting bolts, 1 chain fall, 3 tackles, 2 ladles, 4 wooden horses, 1 oil cabinet, 1 set measures, 1 lot oil cans, 1 oil pump, 1 carpenter's bench and tools, 2 axes, 2 hand axes, 2 hatchets, 1 set fire tools, 1 coal car, 1 pair platform scales, 3 wheelbarrows, 10 scoop shovels, 1 tube scraper, 1 forge, 1 anvil, 5 pairs tongs, 2 hand chisels, 2 lawn mowers, 1 steel rake, 1 wooden rake, 4 forks, 1 weeder, 1 spade, 2 picks, 5 ladders, 3 step-ladders, 200 ft. 2-in. hose and pipe, 2 water coolers, 6 fire pails, 15 water pails, 1 window brush, 1 floor brush, 1 dust brush, 1 feather duster, 1 dust pan, 1 lot cocoa matting, 5 mats, 6 spittoons, 1 lot gas fixtures, 1 dynamo, 26 cells Julien storage battery, 1 arc lamp, 1 lot incandescent lamps and fixtures, 4 bracket lamps, 3 lanterns, 3 hand lamps, 1 desk, 2 tables, 2 clocks, 12 chairs, 1 barometer, 1 hygrophant, 1 thermometer, 2 rain gauges, 1 snow gauge.

TOOLS, ETC., AT ENGINE HOUSE AT POND.

1 12-in. centrifugal pump, 1 No. $2\frac{1}{2}$ Blake pump, 1 Hancock inspirator, 1 belt clamp, 1 stove and pipe, 1 cot-bed and bedding.

REPORT

OF THE

CHIEF ENGINEER OF THE FIRE DEPARTMENT.

CHIEF ENGINEER'S OFFICE, CITY HALL,
CAMBRIDGE, MASS., Dec. 26, 1889.

To His Honor, the Mayor, and the City Council: —

GENTLEMEN: In accordance with the requirements of the ordinance governing the Fire Department, I herewith present my eleventh annual report, for the fiscal year ending Nov. 30, 1889. The report embraces detailed statements, showing the working force, the number of fires and alarms, and their causes, the amount of losses and insurance, the names of members and their respective ranks, and such other information as may be of interest to you.

MEMBERSHIP.

But two changes have been made in the force connected with this department since my last report. William H. Foss, driver of the chemical engine, was discharged by the Board of Engineers, Oct. 24; William Haley, ladderman, of Hook and Ladder Company No. 2, was appointed to fill the vacancy, Nov. 26.

The present force of the department consists of ninety eight officers and men, divided into two classes, as follows:

PERMANENT FORCE.

	Salary each, per year.
1 Chief Engineer and Superintendent of fire-alarm	$1,500 00
1 Assistant Superintendent of fire-alarm	1,200 00
1 Foreman	1,020 00
6 Engineers of steamers	1,200 00
13 Drivers of apparatus	1,020 00
1 Chemical engineman	1,020 00
1 Repairer, fire-alarm	1,020 00
1 batteryman, fire-alarm	480 00

CALL FORCE.

3 Assistant engineers	375 00
6 Foremen	220 00
7 Assistant foremen	210 00
5 Stokers	200 00
31 Hosemen	200 00
21 Laddermen	200 00

APPARATUS.

There are six steam engines in use by this department, five in regular service and one in reserve. Two of the above are first class, with a capacity of six hundred gallons per minute; three are second class, with a capacity of five hundred gallons; and one a third class, in reserve, with a capacity of four hundred gallons. All are in good working condition.

There is also one chemical engine, with two tanks of ninety gallons capacity each. It needs to be touched up with paint, and varnished, otherwise it is in good condition.

The four hose carriages and one hose wagon in regular service are in good condition, with the exception of hose carriage No. 1. It is considerably worn, and in a weak condition. I would therefore recommend that it be replaced with a hose wagon.

The two ladder trucks are in poor condition, and greatly in need of repairs. Some provision should be made to provide a suitable substitute carriage while the repairs are being made. I would renew my recommendation of last year: That a new truck be purchased to take the place of No. 1, which has been in the service a number of years, and has once been rebuilt. The service would then have a spare ladder truck, which it very much needs.

The remaining apparatus in the service is generally in good condition, with the exception of fuel wagon No. 2. This wagon has been in the service the last twenty-six years, and is, in my opinion, not worth being repaired. I would ask that a new wagon be bought to replace it.

I would again call attention to the necessity of providing for an additional engine, and the organization of a company, to be

located in Ward Four, on the south side of Main Street, and west of Pearl Street.

The city is becoming more thickly settled each year, which increases the liability for larger fires. The manufactories are becoming more numerous, and are being enlarged to such an extent, that should a fire get well under way in any of them, the present force would not be sufficient to handle it. By the addition of another engine and company the city would be much better protected, as it would not be necessary to uncover so large a territory while a portion of the department is in attendance at a fire, as is the case at the present time. Then, again, it will not be long before another engine will be required in the easterly end of the city, as that section is fast filling up with manufactories. It is to be hoped that this matter, which has long been delayed, will receive your earliest attention.

HOSE.

The total amount of serviceable 2 1-2-inch hose now in the service is 10,100 feet. During the year, 600 feet have been condemned and 300 feet purchased. It will be necessary, the coming year, to provide for the purchase of a quantity of hose to take the place of that which has already been condemned, and to replace that which may give out.

HORSES.

There are twenty-four horses in use by this department, twenty-three being in regular service and one used for extra purposes. Seven horses were bought, and six disposed of by sale and exchange, the past year. The horses at the present time are generally in good condition, with two exceptions, which are old and stiff and will soon have to be exchanged for younger ones.

FIRE-ALARM TELEGRAPH.

The fire-alarm telegraph has, with constant care and watching, been kept in good working order. The usual repairs, such as the replacing of worn parts and the relocating of wires and poles, have been made during the year. The lines have also been extended and four street signal boxes added; also one

private box purchased by Harvard College, numbered and located as follows:

Box 83, corner of Brattle and Appleton Streets.
Box 121, corner of Brookline and Chestnut Streets.
Box 135, Harvard street, opposite Bigelow Street.
Box 167, corner of Linnæan and Avon Streets.
Box 264, Cambridge Observatory.

The total number of signal boxes now in the service is eighty two.

Owing to the taking down of the old portion of the Putnam school house, the bell and striker, located on that building, had to be removed, and by permission was placed in the tower of St. John's Hall on Fourth Street. The Otis Street school house bell has been, by an order of the City Council, transferred to the tower of Hook and Ladder house No. 2, Portland Street.

HOUSES.

All the houses are generally in good condition, the repairs made during the year being under the direction and supervision of the Superintendent of Public Buildings. I would refer you to his report for particulars.

In September a metallic telephone circuit was constructed at an expense of four hundred dollars, and telephones placed in each of the fire stations, the Chief Engineer's house and fire-alarm office, thus meeting a long-felt want.

APPROPRIATION, RECEIPTS AND EXPENDITURES.

The appropriation for the maintenance of this department for the fiscal year ending Nov. 30, 1889, was: Estimated revenue, $200; appropriation, $55,359.57; making a total of $55,559.57. The total receipts, from the sale of horses, old material and manure, was $421.69. The expenditures were as follows:

Apparatus, repairs	$462 28
Fire-alarm and supplies	1,907 10
Fines of members	108 00
Fuel for houses and engines	1,546 14
Gas	948 76
Amount carried forward	$4,972 28

Amount brought forward	$4,972 28
Harnesses and repairs	193 63
Hay, grain and straw	2,469 30
Horses	1,640 00
Horse-shoeing	555 32
Hose and repairs	403 45
Incidentals	940 96
Pay-roll	42,032 28
Sickness of permanent men	697 50
Telephone lines	400 00
Vacations	700 00
Veterinary services and medicine	223 80
Washing	331 05
	$55,559 57

Appropriation	$55,359 57	
Estimated revenue	200 00	$55,559 57
Amount expended		55,559 57

HYDRANTS.

Owing to the laying out of new streets and the increase of buildings, a large number of hydrants have been located during the year, by order of the Water Board. Thirty one new locations have been provided with post hydrants, and several of the flush pattern have been replaced with post hydrants. Making a total of 656 now in the service.

FIRES AND ALARMS.

The whole number of fires and alarms from all causes during the year was: Bell alarms, 83; still alarms, 33; making a total of 116, or 16 less than the previous year. There were 3 second alarms and 1 general alarm. The losses and insurance, as near as could be ascertained, were as follows:

	Loss.	Insurance.	Ins. Paid.
On Buildings	$34,268 00	$211,150 00	$33,110 00
On Contents	18,906 00	80,450 00	16,882 00
Total	$53,174 00	$291,600 00	$49,992 00

The following table will show the different causes of fires and alarms for the year, ending Nov. 30, 1889 :

Alarms, accidental automatic	4
" automatic	1
" false	4
" out of city	5
Ashes, hot	2
Boiling over of Cement	1
Bonfires	2
Candle	1
Careless use of fire	7
Cigar stubs	2
Chimneys, burning soot in	6
Defective Chimneys and Furnace Pipes	5
Electricity	3
Exhibition alarm	1
Falling of Building, call for assistance	1
Fire-Crackers	1
Forge, hot coals from	2
Gas-Jet	2
Grate, fire from	1
Incendiary	1
Kerosene Lamp, breaking and explosion of	5
Matches, careless use of	2
" children playing with	6
" and Mice	2
Oil, ignition of	2
Over-heated Furnace Pipes	5
Over-heated Bearing	1
Rekindling of Fire	1
Rubbish, burning of	2
Rubber Varnish, ignition of	1
Sparks	6
Smoke mistaken for fire	6
Spontaneous Combustion	5
Unknown	16
Second alarms	3
General alarm	1
Total	116

ACCIDENTS.

While on duty at the fire in Boston, Nov. 28, John Haley, hoseman of Engine Company No. 2, was seriously injured by a heavy plate window glass falling and striking him on the wrist and severing the cords. His injury may possibly deprive him of the full use of his hand in the future. Warren H. Dow,

hoseman of the same company, was slightly injured by being knocked down by falling bricks.

George P. Bannister, hoseman of Engine Company No. 5, was also painfully injured in the left arm by falling bricks.

CONCLUSION.

In closing this report I wish to return my thanks to the Honorable Mayor, the City Council, and the Committee on Fire Department, for the deep interest manifested by them in all matters pertaining to this department, during the year.

The police are also entitled to the thanks of this department for their prompt arrival at fires, and the valuable assistance rendered.

My thanks are also due the officers and men of the fire department for their prompt and faithful discharge of duty the past year.

Respectfully submitted,

THOMAS J. CASEY,
Chief Engineer.

APPENDIX.

JOINT STANDING COMMITTEE ON FIRE DEPARTMENT.

Aldermen.

NEILON AND FRASIER.

Councilmen.

FAIRBAIRN, RADY AND PATRIQUIN.

BOARD OF ENGINEERS.

Name.	Residence.	Rank.	Age.
Thomas J. Casey.....	173 Cambridge Street.....	Chief Engineer.....	56
Nathaniel W. Bunker.....	6 Beech Street.....	1st Asst. "	46
Charles W. Brackett.....	133 Mt. Auburn Street....	2d Asst. "	53
William B. Cade.....	27 Park Street.....	3d Asst. "	55
Nathaniel W. Bunker.....		Secretary of Board.....	

ENGINE COMPANY NO. 1.

House, Brattle Square.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force:			
1	Edwin E. Priest.....	Engineer.....	52	46 Winthrop st.
2	Hiram W. Hooker.....	Driver of engine.....	51	Engine house.
3	Charles R. Hooker.....	Driver of hose.....	45	15 Elliot st.
	Call Force:			
23	John H. Brown.....	Foreman	38	35 Pleasant st.
24	Daniel E. Shea.....	Asst. Foreman	33	Murray st.
25	James Jefferson.....	Fireman of engine....	36	9 Elliot st.
28	William H. Emery.....	Hoseman.....	56	141 Mt. Auburn st.
26	John L. Jones, Jr.....	"	38	650 Main st.
30	James McLean.....	"	29	61 Boylston st.
27	Albert L. Landerkin.....	"	35	1 Wallace Terrace.
29	Edward A. Hurd.....	"	39	Henderson ct.
31	Daniel E. Powers.....	"	30	19 DeWolf st.

ENGINE COMPANY NO. 2.

House, Main Street, near Winsor.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force:			
4	Thomas Wiseman	Engineer	45	392 Main st.
5	John H. Walker	Driver of engine	60	7 Winsor st.
6	Albert F. Sawyer	Driver of hose	46	19 Cherry st.
	Call Force:			
32	James Cunningham	Foreman	47	25 State st.
33	Arthur C. Day	Asst. Foreman	52	47 Austin st.
34	William Parks	Fireman of engine	45	9 Winsor st.
35	Benjamin D Foss	Hoseman	53	21 Cherry st.
36	John McCarthy	"	39	16½ Clark st.
37	John Haley	"	35	1 School st.
38	Charles H. Chapman	"	36	401½ Main st.
39	Warren H. Dow	"	39	414 Main st.
40	John G. Hicks	"	47	78 Pleasant st.

ENGINE COMPANY NO. 3.

House, Fourth Street, near Cambridge.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force:			
7	Hiram Blood	Engineer	57	40 Fifth st.
8	Peter F. McSorley	Driver of engine	30	33 Fourth st.
9	Lorenzo H. Dale	Driver of hose	47	94 Gore st.
	Call Force:			
43	William F. Newman	Foreman	43	42 Winter st.
44	Edwin Winward	Asst. Foreman	45	96 Thorndike st.
45	Elliot E. Alley	Fireman of engine	53	73 Thorndike st.
42	Walter Baker	Hoseman	35	91 Gore st.
46	Timothy J. Mahoney	"	41	100 Vine st.
41	William H. Cairns	"	26	20 Fourth st.
48	John F. Brassel	"	32	12 Warren st.
49	Patrick J. Hayes	"	26	92 Gore st.
47	Exurie J. Willmeth	"	26	39 Fourth st.

ENGINE COMPANY NO. 4.

House, North Avenue, near Russell Street.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force:			
10	John E. Ricker	Engineer	45	185 North ave.
11	George E. Muzzey	Driver of engine	47	221 North ave.
12	Sylvanus G. Griffin	Driver of hose	42	Engine house.
	Call Force:			
53	Edgar H. Locke	Foreman	42	164 Elm st.
52	William J. Hanna	Asst. Foreman	43	9 Rice st.
57	Benjamin Young	Fireman of engine	45	Engine house.
58	Arthur C. Griffin	Hoseman	39	17½ Rice st.
56	Josiah P. Parsons	"	41	2 Regent st.
50	George F. Tibbetts	"	49	6 Beech st.
54	Nicholas J. Penney	"	31	7 Frank st.
55	Jeremiah O'Connor	"	31	41 Spruce st.
51	Daniel McCaughin	"	29	3 Russell st.

ENGINE COMPANY NO. 5.

House, Inman Square.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force:			
13	Charles E. Conner	Engineer	39	511 Cambridge st.
14	Joseph P. Cartwright	Driver of engine	53	529 Cambridge st.
15	Francis P. Carr	Driver of hose	45	195 Hampshire st.
	Call Force:			
59	Francis P. Scanlan	Foreman	43	213 Cambridge st.
60	Conrad D. Kinnear	Asst. Foreman	50	284 Broadway.
61	George W. McIntire	Fireman of engine	34	70 Inman st.
62	John E. Fitzgerald	Hoseman	42	46 Washington st.
64	William T. King	"	33	Engine house.
65	James F. Glynn	"	39	284 Broadway.
66	Hugh T. Barker	"	38	108 Prospect st.
67	George P. Bannister	"	28	414 Main st.
63	William H. Crump	"	38	61 Market st.

CHEMICAL ENGINE COMPANY NO. 1.

House, Western Avenue.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force:			
17	Lewis C. Clark	Engineman	45	Engine house.
18	William Haley	Driver of engine	41	225 Broadway.
	Call Force:			
94	George W. Butler	Hoseman	47	26½ River st.

RELIEF ENGINEER.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force:			
16	William H. Lydston	Engineer	42	30 Pearl st.

HOOK AND LADDER COMPANY NO. 1.

House, Brattle Square.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force:			
19	Albert S. Benson	Driver	45	54 Boylston st.
	Call Force:			
69	Charles Emerson	Foreman	44	14 Wright st.
75	James P. Ewell	Asst. Foreman	53	56 Franklin st.
73	Charles H. Waite	Ladderman	43	52 Pine st.
76	Charles A. Sharon	"	40	Rear 13 Pine st.
78	William R. Mitchell	"	37	15 Charles River st.
79	John A. Bartlett	"	60	132 Auburn st.
80	John H. McDermott	"	39	11 Dodge st.
71	John T. McNamee	"	34	12 Elliot st.
68	James H. Furfey	"	32	23 Prince st.
74	James W. Irwin	"	35	60 Boylston st.
72	Thomas H. Kneeland	"	26	18 Mill st.
77	William Stolba	"	32	17 DeWolf st.
70	Thomas H. Donlan	"	28	31 Bow st.

HOOK AND LADDER COMPANY NO. 2.

House, Portland Street.

No. of Badge.	Name.	Rank.	Age.	Residence.
	Permanent Force:			
21	Thomas L. Hunter	Foreman	49	5 Winsor st.
20	Thomas Mimnaugh	Driver	36	33 Warren st.
	Call Force:			
81	James F. Dalton	Asst. Foreman	52	17 Squire's ct.
87	Joseph E. Chick	Ladderman	39	14 Seventh st.
91	Lincoln E. Wheeler	"	45	231 Broadway.
92	John Gaughan	"	47	25 Ninth st.
90	Albert Smith	"	35	4 Eaton st.
89	Andrew Burke	"	46	87 Vine st.
84	John B. Maguire	"	30	16 Seventh st.
85	Thomas F. O'Connell	"	28	14 Ninth st.
88	Charles H. Cutting	"	36	6 Harold pl.
83	James M. Casey	"	24	173 Cambridge st.
82	James T. McCabe	"	28	152 Franklin st.

FIRE-ALARM TELEGRAPH.

Battery Room, Brattle Square Building.

Name.	Rank.	Age.	Residence.
George J. Blaisdell	Asst. Superintendent	45	46 Winthrop st.
Arthur W. Daniels	Repairer	36	12 Appian Way.
David J. Campbell	Batteryman	42	Fire-Alarm station.

FIRES AND ALARMS.

FROM DEC. 1, 1888, TO DEC. 1, 1889.

DECEMBER.

TUESDAY, Dec. 4, 12.34 a. m. Box 91.

No. 290½ North Avenue. Owned by J. A. Carlton. Loss, $125. Insurance, $1,750. Occupied by A. L. Russell as dwelling. Loss, $50. No insurance. Cause, fire carelessly dropped into wood box near stove.

THURSDAY, Dec. 6, 8.44 p. m. Box 6.

No. 91 Main Street. Owned by G. M. Rogers. Occupied by several families as dwellings. Cause, soot in chimney taking fire.

SATURDAY, Dec. 8, 6.55 a. m. Box 48.

No. 165 Prospect Street. Owned by J. M. French. Loss, $200. Insurance, $3,000. Occupied by J. M. French as dwelling. Loss, $100. Insurance, $1,000. Originated in the cellar. Cause, hot ashes in barrel.

TUESDAY, Dec. 11, 1.22 a. m. Box 75.

Rear Walden Street. Owned and occupied by M. W. Sands as brick manufactory. Loss trifling. Originated in drying room. Cause, overheated furnace.

THURSDAY, Dec. 13, 7.27 a. m. Box 47.

Nos. 44–46 Bigelow Street. Owned by J. M. Robbins. Loss, $397. Insurance, $4,000. Occupied by Samuel McIntire as dwelling. Loss, $584. Insurance, $1,200. No. 46 owned by J. M. Robbins. Loss, $45. Insurance, $2,000. Occupied by Frank Magwire as dwelling. No loss. Originated in No. 44. Cause, overheated furnace-pipe, setting fire to wood-work.

THURSDAY, Dec. 13, 9.45 p. m. Still.

No. 8 Craigie Street. Owned and occupied by G. L. Goodale as dwelling. No loss, Cause, soot in chimney taking fire.

FRIDAY, Dec. 14, 8.29 p. m. Box 41.

Putnam Avenue. Owned by J. K. Abbott. Loss, $200. No insurance. Occupied by Whidden & Bailey as blacksmiths. Loss, $50. No insurance. No. 10 Somerset Street. Owned and occupied by William O'Brien as stable. Loss, $5. Insurance, $75. Owned and occupied by William O'Brien as shed. Loss, $25. Insurance, $25. Originated in blacksmith shop. Cause, hot coals from forge.

SATURDAY, Dec. 15, 7.38 a. m. Box 2.

Rear Prison Point Street. Owned by Boston & Maine Railroad Company. Loss. $1,000. Insurance, $1,000. Occupied as passenger car. Cause, overheated stove.

SUNDAY, Dec. 16, 5.42 p. m. Still.

No. 111 Auburn Street. Owned by J. S. Pollard. Occupied by M. R. Ross as dwelling. Loss trifling. Cause, matches in bureau draw taking fire.

WEDNESDAY, Dec. 19, 1.16 a. m. Box 17.

No. 41 Washington Street. Owned and occupied by W. W. Holden as dwelling. Loss, $250. Insurance, $1,500. Originated on second floor, and extended to roof. Cause, defective chimney.

MONDAY, Dec. 24, 5 p. m. Still.

No. 658 Main Street. Owned by Thayer estate. Occupied by William Porter as dwelling. Loss trifling. Cause, breaking of kerosene lamp.

WEDNESDAY, Dec. 26, 11.30 p. m. Box 25.

No. 471 Main Street. Owned by H. A. Whitney. Loss, $50. Insurance, $6,000. Occupied by Holden & Chadwick as provision store. Loss, $30. Insurance, $500. Cause, spontaneous combustion.

SATURDAY, Dec. 29, 2.31 a. m. Box 35.

Prospect Street. Owned by St. Thomas Aquinas College. Occupied as gymnasium. Loss, trifling. Cause, cigar stub thrown into spittoon filled with sawdust.

JANUARY.

TUESDAY, Jan. 1, 10.30 a. m. Box 10.

First Street. Owned by N. D. Woodbury. Occupied by Underhill & Anderson as drying room. No loss.

THURSDAY, Jan. 3, 1.18 p. m. Box 52.

No. 261 Franklin Street. Owned by Stephen McFadden. Occupied by M. F. Tracy as dwelling. No loss. Originated in wood box, near stove.

SATURDAY, Jan. 12, 8.39 p. m. Box 25.

No. 475 Main Street. Owned by H. A. Whitney. Loss, $59. Insurance, $6,000. Occupied by W. W. H. Foster as dwelling. Loss, $100. No insurance. Cause, child setting fire to a Christmas tree.

WEDNESDAY, Jan. 16, 9.57 p. m. Box 35.

No. 286 Broadway. Owned by S. J. Davis. Loss, $921. Insurance, $3,000. Occupied by Adams & Ellis as grocery and provision store. Loss, $825. Insurance, $1,500. Occupied by C. D. Kinnear as dwelling. Loss, trifling. No. 284 Broadway. Owned by L. J. Russell. Loss, $50. Insurance, $2,500. Occupied by J. F. Glynn as dwelling. Originated in grocery store. Cause, unknown.

FRIDAY, Jan. 18, 11.40 a. m. Box 59.

No. 8 Harvard Row. Owned by Harvard College. Occupied as dormitory. Loss, trifling. Cause, paper near grate taking fire.

SUNDAY, Jan. 20, 12.25 p. m. Still.

No. 78 Mt. Auburn Street. Owned and occupied by James Kernan as dwelling. Loss, trifling. Cause, child setting fire to curtain.

SUNDAY, Jan. 20, 3.01-3.07 p. m. Box 152.

Harvard Street. Owned by Old Cambridge Baptist Society. Loss, $22,700. Insurance, $55,000. Occupied by Old Cambridge Baptist Society as a church. Loss, $5,800. Insurance, $8,000. Cause, furnace pipes setting fire to wood-work.

WEDNESDAY, Jan. 23, 11.25 a. m. Box 26.

No. 403 Main Street. Owned by Hollis Thayer estate. Loss, $100. Insurance, $4,000. Occupied by C. F. Harding as grocery and provisions. Loss, $50. Insurance, $750. Originated in office near stove. Cause, unknown.

MONDAY, Jan. 28, 7.18 p. m. Box 76.

No. 32 Arlington Street. Owned and occupied by P. F. Bonney as dwelling. Loss, trifling. Cause, curtain taking fire from gas-jet.

WEDNESDAY, Jan. 30, 11 a. m. Box 8.

No. 90 Thorndike Street. Owned by A. A. Yeaton. Loss, $486. Insurance, $2,000. Occupied by Louis Cohen as dwelling. Loss, $125. No insurance. Originated in cellar. Cause, unknown.

THURSDAY, Jan. 31, 12.17 a. m. Box 32.

No. 419 Cambridge Street. Owned by James Manning. Loss, $607. Insurance, $5,000. Occupied by O'Laughlin & Leibson as boots and shoes. Loss, $1,376. Insurance, $4,000. Originated in boot and shoe store. Cause unknown.

THURSDAY, Jan. 31, 4.11 a. m. Box 56.

No. 33 Kirkland Street. Owned and occupied by M. S. Nichols as dwelling. Originated in wood shed. Loss trifling.

FEBRUARY.

MONDAY, Feb. 4, 4.14 p. m. Box 59.

College Yard, Matthews Hall. Owned by Harvard College. Loss, $67. Insuranc $40,000. Occupied as dormitory. Originated in the basement. Cause, lighted match dropped amongst waste paper.

WEDNESDAY, Feb. 6, 9.15 p. m. Still.

No. 132 Webster Avenue. Owned and occupied by Hannah Welsh as dwelling. No loss. Cause, soot in chimney taking fire.

THURSDAY, Feb. 7, 8.10 p. m. Still.

Rear 284 Green Street. Owned by B. F. Stevens. Occupied by several families as dwellings. No loss. Cause, soot in chimney taking fire.

THURSDAY, Feb. 7, 10.24 a. m. Box 12.

Rear 177 Bridge Street. Owned by J. F. Doherty. Loss, $20. No insurance. Occupied by Patrick McNichols as dwelling. Loss, $50. No insurance. Originated in clothes closet. Cause unknown.

SATURDAY, Feb. 23, 7.20 p. m. Still.

Main Street. Cause, electric car taking fire. Loss slight.

MONDAY, Feb. 25, 12.41 a. m. Box 68.

Nos. 182-184 North Avenue. Owned by Frank Ivers. Loss, $575. Insurance, $3,000. Occupied by R. M. Pearce as dwelling and dress-maker. Loss, $898. Insurance, $1,000. Occupied by S. C. Whitmore as boots and shoes. Loss, $365. Insurance, $4,000. Originated in dress-making department. Cause unknown.

MARCH.

FRIDAY, March 1, 10.07 a. m. Box 73.

No. 107 Spruce Street. Owned and occupied by Margaret McSweeney as dwelling. Loss, $125. Insurance, $600. Originated in wood box near stove. Cause unknown.

WEDNESDAY, March 6, 3.30 p. m. Still.

No. 340 Green Street. Owned by J. A. Holmes. Occupied by Robert Carson as dwelling. No loss. Cause, paper placed on stove funnel to dry taking fire.

THURSDAY, March 14, 9.06 a. m. Box 28.

No. 172 Broadway. Owned by Geo. G. Page heirs. Loss, $25. Insurance, $500. Unoccupied lumber-shed. Cause, sparks from chimney setting fire to roof.

THURSDAY, March 21, 9.20 a. m. Box 64.

Garden Street. False alarm. Cause, boys found signal-box open, and pulled the hook.

SUNDAY, March 24, 8.11 p. m. Box 32.

No. 446 Cambridge Street. Cause, smoke from chimney mistaken for fire.

MONDAY, March 25, 4.42 a. m. Box 15.

No. 97 Fifth Street. Owned by Francis Gallagher. Occupied by Catherine Ross as grocery. Loss, $100. Insurance, $500. Originated behind the counter. Cause, unknown.

MONDAY, March 25, 7.25 p. m. Still.

Murray Street. Electric car taking fire. Loss, trifling.

SATURDAY, March 30, 1.25 a. m. Still.

Blackstone Street. H. O. Houghton & Co., as book bindery. Cause, accidental automatic alarm.

SATURDAY, March 30, 11.55 a. m. Box 42.

No. 79 Putnam Avenue. Owned by John McDonald. Occupied by G. M. Brown as dwelling. Loss, trifling. Cause, child and matches.

APRIL.

THURSDAY, April 4, 9.48 a. m. Box 4.

Gore Street. Cause, an exhibition, given by order of the Committee on Fire Department.

TUESDAY, April 9, 9.59 p. m. Box 43.

Banks Street. Cause, smoke mistaken for fire.

FRIDAY, April 12, 2.42 p. m. Box 28.

No. 150 Portland Street. Owned by Lowell Institution for Savings. Loss, $200. No insurance. Occupied by Hannaford & Kelso as rubber sole manufactory. Loss, $763. Insurance, $800. Occupied by Bradshaw, Crocker & Co. as manufacturers of boiler-compound. Loss, $80. Insurance, $500. Originated in rubber sole manufactory. Cause unknown.

FRIDAY, April 12, 4.20 p. m. Box 28.

No. 150 Portland Street. Cause, rekindling of fire. Alarm, needless.

MONDAY, April 15, 2.07 p. m. Box 14.

No. 8 Seventh Street. Owned by Wendell Rosenberger. Occupied by Daniel Buckley as dwelling. No loss. Cause, soot in chimney taking fire.

MONDAY, April 15, 2.30 p. m. Still.

Springfield Street, Somerville. Engine Company No. 5 rendered assistance.

THURSDAY, April 18, 6 a. m. Still.

Green Street. Owned and occupied by F. A. Kennedy & Co. as cracker bakery. Cause, accidental automatic alarm.

THURSDAY, April 18, 8.14 a. m. Box 53.

Mt. Auburn Street. Owned and occupied by St. Paul's Church Society. Loss, trifling. Cause, drapery taking fire from candle.

MONDAY, April 22, 5.40 p. m. Still.

Boston & Albany freight yard. Originated in charcoal dust. Cause, set on fire by boys.

WEDNESDAY, April 24, 1.37 p. m. Box 27.

No. 81 Winsor Street. Owned and occupied by Mrs. John Dudley as dwelling. Loss, trifling. Originated on the roof. Cause, sparks from chimney.

MONDAY, April 29, 4.15 p. m. Box 75.

Dublin Street. Owned by L. A. Robillard. Loss, $770. Insurance, $4,500. Occupied by David Marguis as grocery. Loss, $300. No insurance. Cause, lighted match dropped into oil.

MAY.

FRIDAY, May 10, 2.36 a. m. Box 52.

Nos. 240-242 Franklin Street. Cause, falling of a building undergoing repairs.

SATURDAY, May 11, 8.18 a. m. Box 27.

No. 11 Boardman Street. Owned by M. W. Murphy. Occupied by T. J. Paine as dwelling. Loss, trifling. Originated in a bedroom. Cause, matches laying against a hot chimney taking fire.

SUNDAY, May 12, 10.30 a. m. Still.

Green Street. Owned by F. A. Kennedy & Co. as cracker bakery. Cause, accidental automatic alarm.

THURSDAY, May 16, 3.50 p. m. Box 24.

Rear Allston Street. Haystack. Owned by John Nixon. Loss, $20. No insurance. Cause, set on fire by children.

SUNDAY, May 26, 9.30 p. m. Still.

No. 96 Austin Street. Owned by A. A. Spencer. Occupied by Mrs. L. B. Caulking as dwelling. Loss, trifling. Originated in stairway to cellar. Cause, lighted lamp setting fire to hanging clothes.

WEDNESDAY, May 29, 3.25 p. m. Box 9.

No. 69 Cambridge Street. Owned by J. L. Bailey. Occupied by Edward Pollard as glass etcher. Loss, trifling. Originated on the roof. Cause, sparks from chimney.

JUNE.

TUESDAY, June 4, 7.45 p. m. Still.

No. 5 Harvard Square. Owned by Wm. Read heirs. Occupied by Amee Brothers as bookstore. Loss, $25. Insurance, $6,500. Cause, gas-jet setting fire to netting.

THURSDAY, June 6, 11.15 p. m. Still.

No. 23 Marion Street. Owned by W. L. Libby. Occupied by several families as dwellings. Loss, trifling. Originated amongst clothing. Cause, dropping of a lighted match.

SATURDAY, June 8, 4.04 p. m. Box 32.

Fire in Somerville. Assistance called for.

MONDAY, June 10, 12.11 p. m. Box 83.

Rear Mt. Auburn Street. Owned by A. F. Coolidge. Occupied by Stephen Baker as dwelling. Loss, $50. No insurance. Originated in bedroom. Cause, children and matches.

MONDAY, June 10, 5.28 p. m. Box 41.

No. 14 Somerset Street. Owned and occupied by Mary Riley as wood shed. No loss. Cause, children and matches.

WEDNESDAY, June 12, 2.29 a. m. Box 51.

No. 61 Dana Street. Owned by Emmons Raymond. Loss, $235. Insurance, $6,000. Occupied by J. P. Wade as dwelling. Loss, $23. Insurance, $1,000. Occupied by Mrs. W. W. Bird as storage of furniture. Loss, $100. No insurance. Originated in room where furniture was stored. Cause, spontaneous combustion.

FRIDAY, June 14, 8.30 p. m. Still.

Soden Street. Burning rubbish. Cause, set on fire by boys.

MONDAY, June 17, 7 a. m. Box 32.

No. 142 Elm Street. Owned by Parker heirs. Occupied by E. S. Keefe as stable. Loss, trifling. Originated among grain bags. Cause, pipe smoking.

TUESDAY, June 18, 12.29 p. m. Box 17.

No. 37 Harvard Street. Owned and occupied by F. H. Holton & Co. as coppersmiths. No loss. Cause, sparks from furnace.

MONDAY, June 24, 1.52 p. m. Box 42.

No. 5 Blackstone Street. Owned and occupied by D. F. Burns as elastic cement manufactory. Loss, $200. No insurance. Cause, kettle of boiling cement taking fire.

WEDNESDAY, June 26, 3.28–3.38 a. m. Box 27.

Broadway. Owned by Broadway Baptist Society. Loss, $1,535. Insurance, $16,000. Occupied by Broadway Baptist Society as church. Loss, $371. Insurance, $2,000. Cause, unknown.

SATURDAY, June 29, 6.50 p. m. Still.

Blackstone Street. Cause, accidental automatic alarm.

JULY.

THURSDAY, July 4, 9 a. m. Still.

No. 531 Main Street. Owned by George Bird. Occupied by William Randell as hairdresser. Loss, trifling. Cause, fire-crackers.

FRIDAY, July 5, 3.45 a. m. Box 271.

No. 27 Cedar Street. Owned by Albert Brown heirs. Loss, $500. Insurance, $500. Occupied by L. G. Columbus as tinsmith. Loss, $200. No insurance. Occupied by R. J. Patterson as storage. Loss, $500. No insurance. No. 25 Cedar Street. Owned by

Catherine Holden. Loss, $200. No insurance. Occupied by James McCarville as dwelling. Loss, $50. Insurance, $1,500. No. 29 Cedar Street. Owned by J. F. O'Brien. Loss, $130. Insurance, $5,000. Occupied by several parties. Originated in tin manufactory. Cause unknown.

FRIDAY, July 5, 11.11 p. m. Box 9.

No. 4 Cambridge Street. Owned by C. O. Brigham. Occupied by J. J. McDonald, a carriage builder. Loss, trifling. Cause, hot coals from forge.

SATURDAY, July 6, 8.44 p. m. Box 68.

No. 165 North Avenue. Owned and occupied by W. H. Higgins as carpenter shop. Loss, $400. Insurance, $200, Cause, unknown.

MONDAY, July 15, 10.14 p. m. Box 36.

Main Street. Cause, smoke, mistaken for fire.

TUESDAY, July 23, 10.30 a. m. Still.

No. 25 Holyoke Strect. Owned by Mrs. G. C. Buckland. Loss, $10. Insurance, $8,500. Occupied by Mrs. G. C. Buckland as dwelling. Loss, $75. Insurance, $500. Originated in clothes closet. Cause, burning sulphur to kill moths.

WEDNESDAY, July 24, 2 p. m. Box 216.

Ninth Strcet. Owned and occupied by American Rubber Co. Originated in a shed. Cause, ignition of rubber varnish.

WEDNESDAY, July 24, 8.40 p. m. Box 68.

Somerville Avenue. Owned by S. F. Woodbridge. Occupied by Joseph LeFarve as carriage-house. Loss, $35. Insurance, $500. Cause, incendiary.

FRIDAY, July 26, 1.55 p. m. Still.

Rear 138 Gore Street. Owned by John Lane. Occupied by Margaret Wilson as dwelling. Loss, trifling. Cause, mice and matches.

AUGUST.

MONDAY, Aug. 5, 4.37 p. m. Box 6.

No. 72 Main Street. Owned and occupied by Edward Kendall & Sons as boiler manufactory. Cause, ignition of oil. Alarm, needless.

TUESDAY, Aug. 6, 12.49 p. m. Box 62.

No. 185 Mount Auburn Street. Cause, boy burning camphor on roof of building. Alarm needless.

FRIDAY, Aug. 16, 11 p. m. Still.

No. 167 Broadway. Owned by Geo. G. Page Box Co. Occupied by Nicholas Sennott as dwelling. Loss, trifling. Cause, breaking of kerosene lamp.

SATURDAY, Aug. 17, 5.13 p. m. Box 9.

Otis Street. Owned by James Woodbury. Occupied by A. B. & E. L. Shaw as furniture manufactory. Loss, $215. Insurance, $23,000. Originated in circular-saw frame. Cause, over-heated bearing.

THURSDAY, Aug. 22, 2.53 a. m. Box 168.

No. 190 North Avenue. Owned by Frank Ivers. Loss, $25. Insurance, $4,000. Occupied by Patrick Duffy as fruit store. Loss, $35. Insurance, $250. Cause, unknown.

THURSDAY, Aug. 22, 3.45 p. m. Still.

No. 80 Otis Street. Owned and occupied by W. E. Doyle, as dwelling. Loss, trifling. Originated on outside of building. Cause, unknown.

SATURDAY, Aug. 24, 12.58 a. m. Box 48.

Line Street. Fire in Somerville. Assistance rendered.

SEPTEMBER.

MONDAY, Sept. 9, 11 p. m. Box 83.

No. 212 Brattle Street. Owned by Norman McDonald & Co. Loss, $334. Insurance $1,200. Occupied by Norman McDonald & Co. as marble works. Loss, $1,550. Insurance, $6,000. Originated on second floor. Cause unknown.

TUESDAY, Sept. 10, 8 a. m. Box 75.

Rear Walden Street. Owned and occupied by M. W. Sands as brick manufactory. Loss, $40. Insurance, $3,000. Originated in drying room. Cause, overheated furnace.

TUESDAY, Sept. 10, 11.46 a. m. Box 9.

No. 18 Cambridge Street. Owned and occupied by I. G. Felt as blacksmith. Loss, trifling. Cause, defective chimney.

WEDNESDAY, Sept. 11, 11.55 p. m. Still.

No. 126 Cambridge Street. Owned and occupied by C. H. Hartwell as provision store, Loss, trifling. Cause, electric light wires.

THURSDAY, Sept. 12, 10.30 p. m. Still.

No. 44 Fourth Street. Owned by R. E. Price. Loss, $15. Insurance, $500. Occupied by R. E. Price as dwelling. Loss, $8. Insurance, $300. Cause, breaking of kerosene lamp.

FRIDAY, Sept. 20, 12.45 p. m. Still.

No. 60 Dana Street. Cause, smoke mistaken for fire.

TUESDAY, Sept. 24, 8.55 p. m. Box 158.

No. 44 Garfield Street. Owned by F. J. Thayer. Loss,$900. Insurance, $1,000. Occupied by F. J. Thayer as stable. Loss, $316. Insurance, $350. Cause, ignition of oiled clothes.

TUESDAY, Sept. 24, 9.33 p. m. Box 2.

Prison Point Street. Owned and occupied by Boston & Maine Railroad Company as paint shop. Loss, $100. Insurance, $3,000. Originated in a clothes closet. Cause spontaneous combustion.

MONDAY, Sept. 30, 9.52 p. m. Box 29.

No. 22 Worcester street. Owned and occupied by Millard Fillmore as dwelling. Loss, trifling. Cause, over-heated furnace.

OCTOBER.

FRIDAY, Oct. 4, 12.40 a. m. Still.

No. 197 North Avenue. Owned by A. B. Potter. Occupied by C. A. Loges as paint-shop. Loss, trifling. Originated in a basket of oiled rags. Cause, spontaneous combustion.

SATURDAY, Oct. 5, 8.04 a. m. Box 27.

No. 65 Moore Street. Owned by Mrs. Q. A. Shaw. Loss, $175. Insurance, $3,000. Occupied as kindergarten school. Cause, furnace pipes setting fire to floor.

WEDNESDAY, Oct. 9, 9 a. m. Still.

No. 3 Mason Street. Owned and occupied by Mrs. G. B. Gray as dwelling. No loss. Cause, soot in chimney taking fire.

WEDNESDAY, Oct. 9, 12.42 p. m. Box 12.

Rear Water Street. Fence. Owned by Nash, Spaulding & Co. Loss, trifling. Originated in some refuse tar. Cause, sparks from locomotive.

THURSDAY, Oct. 17, 9.18 p. m. Box 31.

Rear South Street, Somerville, near Cambridge line. Assistance rendered.

THURSDAY, Oct. 17, 9.42 p. m. Box 23.

No. 56 Brookline Street. Owned and occupied by Henry McCaw as stable. No loss. Cause, breaking of kerosene lantern.

TUESDAY, Oct. 22, 4.30 p. m. Still.

No. 529 Cambridge Street. Owned by Henry Emerson. Occupied by several families as dwellings. No loss. Originated in cellar. Cause, hot ashes.

SUNDAY, Oct. 27, 12.24 p. m. Box 69.

No. 6 Day Street. Cause, smoke mistaken for fire.

NOVEMBER.

FRIDAY, Nov. 1, 5.20 p. m. Still.

Albany Street. Cause, burning rubbish, set afire by boys.

WEDNESDAY, Nov. 6, 6.45 a. m. Box 6.

Binney Street. Owned by City of Cambridge, pile sheathing around sewer. Loss, $200. Cause, by burning rubbish.

WEDNESDAY, Nov. 6, 8.32 a. m. Box 42.

River Street. Electric cable house on the bridge, Boston side. Cause, electric fluid.

WEDNESDAY, Nov. 6, 6.10–6.15 p. m. Box 17.

Nos. 240–242 Main Street. Owned by John Stewart. Loss, $136. Insurance, $16,000. Occupied by Jerome Smythe as piano stool maker. Loss, $237. Insurance, $1,000. Occupied by S. A. Stewart & Co. as storage for carriages. Loss, $2,700. Insurance, $8,000. Occupied by Jaques Bros. as pattern makers. Loss, $368. Insurance, $2,500. Originated in Smythe's apartment. Cause, unknown.

THURSDAY, Nov. 7, 11.42 p. m. Box 61.

Murray Street. Owned by West End Railway Co. Occupied as horse-car. Loss, $300. Insurance, $800. Cause, kerosene lamp taking fire.

SATURDAY, Nov. 16, 12.35 p. m. Still.

Second Street. Occupied by Keeler & Co. as furniture manufactory. Cause, accidental automatic alarm.

SUNDAY, Nov. 17, 12.58 p. m. Box 72.

Rear Harvey Street. Owned by Boston & Maine Railroad Co., sleepers. Loss, $200. No insurance. Originated in grass. Cause, sparks from locomotive.

TUESDAY, Nov. 19, 12.42 p. m. Box 62.

No. 35 Ash Street. Cause, smoke mistaken for fire.

SUNDAY, Nov. 24, 2.50 p. m. Still.

No. 43 Brookline Street. Owned by Eugene Schoeplin. Occupied by S. M. Bushnach as dwelling. Loss, $11. Insurance, $300. Originated in clothes closet. Cause, mice and matches.

THURSDAY, Nov. 28, 9.32 a. m. Box 2.

Fire in Boston. Assistance called for. Engine Co's Nos. 2, 3, 5 and H. & L. Co. No. 2 rendered assistance.

FIRE ALARM TELEGRAPH.

LOCATION OF BOXES.

2. Prison Point St., cor. Bridge.
4. Gore St., J. P. Squire's Works.
6. Third St., cor. Broadway.
6. W. B. Bridge, Transfer Station (duplicate).
7. Third St., cor. Bent.
8. Thorndike St., cor. Third.
9. Cambridge St., near First.
10. Thorndike St., near First.
12. Third St., cor. Winter.
12. North Street, cor. Water (duplicate).
13. Fourth St., Engine House No. 3.
14. Sixth St. cor. Cambridge.
15. Vine St., cor. Fifth.
16. Broadway, Greely's Mill.
17. Washington St., cor. Brewery.
21. Sydney St., cor. Allston.
23. Pearl St., cor. Auburn.
24. Brookline St., cor. Valentine.
25. Lafayette Sq.
26. Main St., cor. Osborn.
27. Clark St., cor. Harvard.
28. Broadway, near Brewery.
29. Pine St., cor. Washington.
31. Cambridge St., cor. Harding.
32. Columbia St., cor. Cambridge.
34. Hampshire St., cor. Columbia.
35. Harvard St., cor. Norfolk.
36. Main St., cor. Prospect.
37. Junction Pleasant and River Sts.
38. Magazine St., cor. Lake.
39. Magazine St., cor. Chestnut.
41. Pleasant St., cor. Fairmont.
42. Blackstone St., opp. Riverside Press.
43. Banks St., cor. Flagg.
45. Franklin St., cor. Soden.
46. Main St., cor. Hancock.
47. Broadway, cor. Antrim.
48. Inman Sq., Engine House No. 5.
49. Cambridge St., cor. Baldwin.
51. Broadway, cor. Ellery St.
52. Junction Main and Mt. Auburn Sts.
53. Mt. Auburn St., cor. Holyoke Pl.
54. Cambridge St., Memorial Hall.
56. Kirkland St., cor. Sumner.
57. Oxford St., cor. Mellen.
59. Harvard Sq., cor. Brattle St.
61. Brattle Sq., City Building.
62. Mt. Auburn St., cor. Hilliard.
63. Junction Brattle and Mason Sts.
64. Junction Concord Ave. and Garden St.
65. North Ave., cor Shepard St.
68. North Ave., near Railroad Bridge.
69. North Ave., cor. Day St.
71. North Avenue, near Tannery.
72. Cedar St., cor. Dudley.
73. Spruce St. near Bay State Brick Yard.
74. Dublin St., cor. Railroad.
75. Walden St., cor. Raymond.
76. Walnut Ave., cor. Arlington St.
78. Concord Ave., cor. Sparks St.
79. Brattle St., cor. Sparks.
82. Brattle St., cor. Appleton.
83. Brattle St., cor. Elmwood Ave.
87. Lake View Ave., near Concord Ave.
89. Concord Ave., near Hittinger's Ice House.
92. Mt. Auburn St., near Railroad Stable.
93. Locust St., cor. Cushing.
114. Ninth St., Goepper Bros. Barrel Factory.
116. Broadway, Tower's Piano key Factory
121. Brookline St., cor. Chestnut.
125. Green St., F. A. Kennedy's Cracker Bakery.
134. Tremont St., cor. Hampshire, City Stable.
135. Harvard St., opp. Bigelow.
137. Western Ave., cor. Howard.
152. Junction Main and Bow Sts.
158. Oxford St., cor. Harris.
167. Linnæan St., cor. Avon.
168. North Ave., Engine House No. 4.
216. Ninth St., Rubber Factory Yard.
223. Morse & Whyte's, 10 Franklin St.
242. Albro St., Electric Light Works.
264. Cambridge Observatory.
271. North Avenue, Railroad Stable.

INSTRUCTIONS TO KEY HOLDERS.

Alarms to be given from the box nearest the location of the fire.

Do not give an alarm for a fire seen at a distance, unless assistance is called for.

To give an alarm, open the door, pull the hook to the bottom of the slot once, and let go. Each box contains a small bell, which, if heard before you pull, indicates that an alarm has been previously given, and by listening at the box, you will learn the number of the box from which the alarm was given, but in no case will you pull the box while the alarm is striking. After giving the alarm, remain at the box, so as to direct the firemen to the fire. Be sure that you lock the box before leaving it.

Citizens are requested to inform themselves where keys to the signal boxes are kept, signs suitably inscribed being placed over each box, giving the requisite information.

INSTRUCTIONS TO FIREMEN.

First alarm will be given by striking *three* or more rounds.

Second alarm will be given by repeating the first.

General alarm will be given by striking *three blows* on the gongs and bells.

In cases where hook and ladder companies only are wanted, the call will be given by striking *five blows*.

Companies not required to respond to first or second alarms will be notified of the extinguishment of a fire by *two blows* on the gongs, that their services will not be needed, and that orders have been given to "make up." Should an alarm be given from any box while a portion of the department is engaged at a fire, the apparatus not in service will respond.

REPORT

OF

THE CHIEF OF POLICE.

To the Honorable, the Mayor, and the City Council of the City of Cambridge:—

GENTLEMEN: In compliance with the City Ordinance, I have the honor to present my annual report of the work of the Police Department for the year ending Nov. 30, 1889.

The whole number of arrests for the year have been one thousand five hundred and forty-four (1,544), against 1,469 last year.

Males	1,374
Females	170
Adults	1,212
Minors	332

The offences for which arrests have been made are as follows:

Assault and battery	162
Assault, felonious	6
Assault on officer	21
Attempt to rape	1
Attempt to murder	1
Abortion	2
Altering sealed measures	2
Adultery	9
Adulterated milk	9
Bastardy	11
Breaking and entering	45
Bigamy	1
Bail bond	1
Capias	4
Cock-fighting	20
Common drunkards	3
Common nuisance	1
Amount carried forward	299

Amount brought forward	299
Cruelty to dumb animals	3
Concealing mortgaged property	1
Disturbing the peace	63
Drunkenness	714
Disorderly conduct	4
Disturbing public school	2
Delirium tremens	5
Disturbance in a horse car	2
Embezzlement	7
Escaped prisoners	2
Evading car fare	1
Exposure of person	4
Forgery	1
False pretences	3
Insane	44
Keeping unlicensed dog	2
Keeping dangerous dog	1
Larceny	10
Lewd and lascivious	1
Libel	1
Liquor nuisance	38
Malicious mischief	22
Manslaughter	1
Maiming	1
Non-support	14
Neglected children	6
Obstructing a horse car	2
Playing cards on Lord's Day	1
Peddling without a license	27
Profane language	6
Perjury	1
Receiving stolen goods	3
Robbery	2
Rude and disorderly conduct	1
Safekeeping	6
Stubborn children	5
Stealing a ride	2
Suspicious persons	7
Surety of the peace	12
Swindling	1
Selling leased property	2
Truants	5
Vagrants	14
Violating City Ordinances	64
Violating Lord's Day	4
Violating Liquor law	12
Ticket of leave	1
Wilful trespass	19
Total	1,544

Whole number of lodgers	534
Males	505
Females	29
Adults	504
Minors	30
Amount of property reported stolen	$5,777
Amount of property reported recovered	$3,709

MISCELLANEOUS BUSINESS.

Accidents reported	77
Buildings found open and secured	236
Cases investigated	958
Dangerous buildings	3
Dead bodies found	8
Defective cesspools.	41
Defective drains and vaults	16
Defective fire alarms and clocks	2
Defective gas pipes	4
Defective water pipes	43
Defective hydrants	4
Defective lamps	1
Defective streets and sidewalks	1,455
Disturbances suppressed	252
Dogs killed	87
Extra duties done by officers (days)	514
Fire-alarms given by officers	10
Fires extinguished without alarms	15
Intoxicated persons helped home	12
Lost children restored	215
Sick and injured persons assisted	11
Stray teams put up	37
Street obstructions removed	12
Water running to waste	23

CITY PROPERTY IN USE BY POLICE DEPARTMENT.

105	Badges	$150 00
100	Billies (short)	50 00
12	Buckets	6 00
150	Billies and belts	225 00
2	Bookcases	12 00
4	Bedsteads	12 00
8	Books	26 00
2	Brooms	50
2	Bureaus	3 00
1	Buggy	50 00
	Bedding and blankets	30 00
	Amount brought forward	$564 50

	Amount brought forward	$564 50
8	Clocks	30 00
2	Cot beds	3 00
50	Chairs	40 00
3	Coal hods	1 00
4	Carpets	35 00
1	Copying machine	8 00
8	Desks	180 00
2	Dust pans	50
2	Horses	400 00
2	Harnesses	50 00
2	Horse blankets	6 00
13	Pairs of handcuffs	35 00
1	Hat rack	50
2	Halters	1 00
1	Ice hatchet and tongs	1 00
20	Lanterns	20 00
5	Lounges	30 00
1	Letter scale	75
8	Mirrors	14 00
12	Mats	50 00
3	Maps	1 00
3	Oil cans	1 50
1	Police van (new)	400 00
1	Pair of runners	6 00
76	Revolvers	532 00
	Ropes and stakes	25 00
3	Robes	15 00
1	Rogues' gallery	150 00
2	Straps and weights	1 00
4	Slates	75
16	Spittoons	4 00
1	Sleigh	50 00
4	Stretchers	6 00
3	Saddles	15 00
1	Safe	200 00
2	Stoves	20 00
3	Thermometers	75
	Telephone line	300 00
30	Tin dippers	3 00
12	Towels	2 50
8	Tables	24 00
3	Umbrella stands	2 00
6	Waste-baskets	2 00
4	Water coolers	4 00
4	Water pails	1 00
1	Wagon jack	1 00
1	Wardrobe	10 00
2	Washbowls	75
1	Wagon	25 00
1	Wagon (old van)	35 00
	Total	$3,308 50

Total cost of the department for the year	$87,400 68
Appropriation and estimated revenue	87,000 00

EXPENDITURES.

Badges	27 00
Belts	122 00
Books	177 62
Boarding horses	564 00
Billies	100 60
Buttons	40 00
Carriage hire	25 00
Cleaning Station No. 3	120 00
Cambridge Gas Light Co.	483 01
Directories for the department	25 00
Expressing	7 75
Medicines	2 90
Medical attendance	6 00
Printing	20 50
Photographs for rogues' gallery	36 00
Police cloth for department	683 84
Policemen, services of	78,242 01
Repairs on wagons	70 50
Repairs on harnesses	13 55
Shoeing horses	40 25
Supplies for stations	366 53
Salaries of captains	3,744 00
Salary of Chief of Police	1,700 00
Travelling expenses	272 97
Telephone Company	109 65
Wagon (new van)	400 00
Total	$87,400 68

Expenditures	$87,400 68
Receipts	4,873 23
Balance showing actual cost	82,527 45
Cost over appropriation and estimated revenue	400 68
Cloth on hand to be carried over to new account	91 90

The organization of the force consists of a chief, three captains, ten sergeants, and sixty-five patrolmen. One sergeant and fifteen patrolmen are on duty in the daytime, including one patrolman who has charge of Station Five. Two sergeants are detailed as inspectors. During the night-time there are seven sergeants and fifty patrolmen on duty: one as a house sergeant at Station One, six as patrol sergeants, two in each police district, a sergeant with each relief, three patrolmen as house officers, and forty-seven officers, divided into two reliefs.

During the past year there have been several changes in the department as follows: the reduction of Sergeant Edward

Brady to a patrolman; the promotion of Patrolman Charles L. Pike to the rank of sergeant; the death of George A. Marston, an old and efficient officer; the dismissal of George A. Dudley and Edward Brady from the force for disability, and of William H. Ryan for violation of Rule 53 of the rules and regulations. The vacancies caused by the death and discharges of the above named officers were filled, and the promotion was made in compliance with the rules of the civil service law.

The matrons appointed in 1887 to take sole charge of all females arrested in the city, have done their work well and faithfully. The past year they have been called to take charge of one hundred and sixty-two prisoners.

In 1889, as in 1888, under the no license law, a determined effort has been made to suppress the illegal sale of intoxicating liquors. During the year we have procured search warrants and searched ninety two places, and have also prosecuted fifty persons for violation of the liquor law. The difficulties attending the enforcement of the liquor law are such as never appear in any other criminal case; to obtain evidence in these cases is very difficult. Good citizens, who would assist an officer in any other matter, decline to make any disclosures in regard to the illegal sale of liquors. It is, therefore, obligatory on the officers to depend entirely on their own observations for evidence to convict a person of a violation of the law. Officers are very often satisfied in their own minds that illegal sales of liquor have been made, but the same evidence that satisfied them and other people would not satisfy a court or jury.

During the past year we have also seized, confiscated, and turned over to the chief of the Massachusetts District Police a quantity of liquors.

In 1888 I recommended to the Committee on Police the advisability of furnishing cloth to members of the force in order to have them all uniformed alike. In years past each officer has got his uniform made wherever he liked, and the result was all shades of cloth; the committee gave me power to procure cloth, and I have done so, and find I am getting my officers uniformed alike. In the past year I have bought cloth for the department to the amount of six hundred and eighty-three dollars and eighty-four cents ($683.84), and have sold cloth to the officers to the amount of five hundred and ninety-

one dollars and ninety-four cents ($591.); and have turned the same over to the City Treasurer, and have now on hand cloth to the value of ninety-one dollars and ninety cents ($91.90).

I would suggest to your Honor and the City Council the advisability of taking some action in the matter of pensioning ome of our old and faithful officers.

I would recommend an increase of the force of four men; one for duty in North Cambridge, and three for the New Harvard Bridge, two by night, and one by day. We are far behind other cities in the number of men allowed, notwithstanding the increase in population, and also the amount of work we are called upon to perform.

I would also recommend the Police Signal System. With this system, and the increase of force as recommended, I feel that we should have a very efficient police force, and our city would be as well protected as any city in the Commonwealth. With the introduction of the new system of telephone boxes instantaneous communication is established between the stations and every patrolman on his route in the city. The system is no longer an experiment, but an accomplished fact; and as its value for police purposes can hardly be overestimated, it is hoped that our City Council will provide for its general use in the department.

In submitting my report I desire to tender my thanks to His Honor, Mayor Gilmore, and to you, gentlemen of the City Council, and especially to thank the gentlemen comprising the Committee on Police; also His Honor Judge Orcutt; and His Honor Judge Sanger; Mr. Walter W. Pike, City Clerk; City Solicitor Charles J. McIntire; District Attorney William B. Stevens, and Assistant District Attorney Cooney for their counsel and friendly advice. To them I feel under great obligations, and also to the members of the force, for the prompt and efficient manner in which they have discharged the duties of their office.

In closing I have simply to say that I have endeavored to discharge the duties of the office faithfully, economically, and impartially. I have the honor to be, gentlemen,

Your obedient servant,

LOTHROP J. CLOYES, *Chief of Police.*

REPORT

OF

THE PROBATION OFFICER.

CAMBRIDGE, Dec. 1, 1889.

To His Honor the Mayor and the Board of Aldermen:—

GENTLEMEN: I herewith submit my fifth annual report as Probation Officer, for the year ending Nov. 30, 1889.

Whole number of cases investigated	1,127
Number of persons on probation Nov. 30, 1888	25
Number placed on probation since	104
Whole number in care during the year	129
Petitions for release from the House of Correction investigated	6
Pardons recommended and granted	4

OFFENCES OF PERSONS PROBATED DURING THE YEAR.

Assault and battery	3
Breaking and entering (boys)	11
Common drunkard	1
Drunkenness, first offence	48
Drunkenness, second offence	14
Disturbing the peace	2
Disturbing a school	1
Embezzlement	1
Larceny	11
Non-support of children	3
Receiving stolen property	2
Violation of city ordinances	2
Wilful trespass	4
Selling mortgaged property	1

AGE, SEX, ETC.

Number under twenty years of age	32
" between twenty and thirty	39
" " thirty and forty	21
" over forty	12

Males	93
Females	11
Married persons	41
Single persons	63
Dependent children in the families of the married persons	83

NATIVITY.

Natives of the United States	70
" " Ireland	15
" " the British Provinces	14
" " England	3
" " Scotland	2

OCCUPATION.

Apprentice	1
Attend schools	27
Clerks	2
Employed in manufactories	8
Housework	9
Laborers	16
Mechanics	26
Railroad employés	2
Teamsters and drivers	6
Storework	3
Salesmen	4

RESULTS.

Cases placed on file for good conduct	74
Defaulted or surrendered for sentence	14
Doubtful cases disposed of by the payment of the costs of court	5
Cases remaining on probation Nov. 30, 1889	36

Respectfully submitted,

FREDERICK W. HAGAR,

Probation Officer.

REPORT

OF THE

BOARD OF HEALTH.

In compliance with the public statutes creating Boards of Health and defining their duties, we have the honor to make our annual report for the year ending Dec. 31, 1889.

We respectfully call the attention of your honorable body to the following list of complaints and nuisances investigated during the year: —

Full, overflowing, and offensive privy vaults	580
Open, defective, and leaky privy vaults	165
Filthy and defective privy houses	95
Offensive and defective water-closets	78
Swill and garbage thrown into privy vaults	15
Offensive and obstructive sluice-vaults	20
Privies on or near line	25
No proper privy vaults	13
Full and defective cesspools	67
Defective drainage, open and broken drains, etc.	285
No traps under sinks	26
Leaky and defective traps	29
Leaky and defective sinks and bowls	35
Filthy and dirty yards	139
Swill, garbage, ashes, etc., in cellars and sheds	97
Filthy stables and cow sheds	45
Manure in yards and on lots	48
Wet and damp cellars	65
Stagnant water on premises	82
Swine kept on premises	9
Miscellaneous	136
Total	2,054

Number of inspections made	2,271
Number of subsequent inspections	1,947
Total	4,218

Number of notices issued and recorded		1,005
Number of second notices issued		30
Number of special notices issued		121
Number of verbal notices given		223
Copies of regulations of the board issued		285
Orders of the board served by constable		7
Complaints received and investigated		394
Complaints sustained	381	
Complaints not sustained	13	
Vaccinations and re-vaccinations		291
Rooms fumigated		145
Number of notices for treatment of contagious diseases, sent out		481
Number of visits to premises where contagious diseases occurred during the year		529

The increase in the number of inspections, 427, was largely due to the increased prevalence of diphtheria. The number of nuisances shows a general decrease, mainly due to the fact that the orders of the Board have usually been promptly complied with.

Last fall the attention of the Board was called to the condition of a slaughter-house and pigpens situated on a tributary of Stony Brook, in Lincoln. A visit to this place left no doubt of the need for some action.

The location and condition of the privy vaults along the water supply of the city, in the same region, should also receive attention. While Fresh Pond and its immediate neighborhood are being improved and made beautiful, let us not be lulled to sleep in a Fool's Paradise, and permit the sources of the water supply, the really important matter, to be contaminated by slaughter-house and pigpen filth, and by human excrement. The Board would renew its recommendation of last year, for a patrol of Stony Brook and its tributaries.

The nuisance caused by the odors emanating from Niles's Slaughter-house continues. This odor arises in the preparation of a fertilizer from the blood and scraps of the slaughtered hogs. At present this appears to be the best method for the disposal of these substances. There is no radical remedy short of the removal of the establishment, which should never have been allowed to occupy its present situation.

The increase throughout the city of tenement-houses, and so-called "Hotels," cannot be viewed with favor from a sani

tary point. A large number of persons, many of them children, dwelling in one building, having entrances, passage ways, and staircases in common, and possessing free access to each others' apartments, supply the readiest means for the importation and dissemination of contagious diseases. Many of the inmates of these places are persons who know little of the measures necessary for the preservation of health, and frequently care less for them. In the event of the outbreak of a serious epidemic, these places might prove hot-beds of infection. Alarm may have been roused in some minds by the published statements that epidemics of influenza are apt to be followed by Asiatic cholera. There appears to be no sufficient evidence for belief in a causal connection between these diseases. Alarm is never necessary. Vigilance is always necessary. Scrupulous cleanliness, both personal and of the surroundings of dwellings, is one of the most powerful factors in the preservation of health, and is a great safeguard against the effects of diseases, endemic and epidemic. No instance of transmission of any Zoögenous disease to man has come to the knowledge of the Board during the year. In view, however, of the loathsome nature and great fatality attending these affections, the attention of the inhabitants of Cambridge generally, and of the veterinary surgeons in particular, is called to the following extracts from the rules promulgated by the State Cattle Commission.

Rule 1. Whoever has knowledge of . . . a contagious disease among any species of domestic animals . . . shall forthwith give notice to the Board of Health.

Rule 3. An order, written or verbal, to securely hold such suspected animals in isolation shall be binding, whether given by a member of the Board of Health, an authorized agent of such Board, or by a single member of the State Cattle Commission.

Rule 4. Persons having the care or custody of suspected animals, whether such animals are their own property or otherwise, and having received an order for their isolation, shall neither sell, swap, trade, give, nor in any way dispose of such animals, nor drive, nor work, nor move, nor allow them to be moved away from the place of isolation, nor allow other animals not already exposed to come in contact with them.

Rule 5. In cases of suspected contagious pleuro-pneumonia among cattle, or swine-plague, or cholera among swine, the entire herd must be secured against communication with other animals of the same species that have not been exposed to the suspected animals. . . .

Rule 6. Horses or mules suspected of having the disease known as glanders, or farcy, may only remain in the custody of their owners, and in the stalls, or on the premises previously occupied by them, when in the judgment of boards of health such owners can be relied on. . . .

Rule 7. The death of a citizen of this State from that loathsome and fatal disease, glanders, contracted from a diseased horse . . . makes it imperative that we call the attention of all good citizens to the statutes provided for the suppression of contagion among domestic animals.

The number of deaths in Cambridge during 1889 was 1,356. Of this number 71 were returned as still-born ; 22 as premature birth, and two of the deaths as due to injury received during labor. This leaves 1,261 for the various diseases, to which a few words may be devoted. Below is a statement of the numbers of either sex dying at certain ages.

DEATHS AT 15 AGE-GROUPS.

Ages.	Under 1	2	3	4	5	Total Under 5	10	15	20	25	35	45	55	65	75	Over 75
Males.	165	53	21	10	16	265	34	14	15	22	52	38	49	45	54	42
Females.	133	53	23	8	14	231	33	17	28	26	43	49	39	57	48	60

The death rate here, as elsewhere, is heavy under five years of age. Of the 1,261 deaths in the above table, 496, or more than 39 per cent., were of children under five years of age.

Compared with 1888, diphtheria shows an increase of 129 cases and 45 deaths ; typhoid fever, an increase of 35 cases, and a decrease of 2 deaths ; scarlet fever a decrease of 33 cases, and a decrease of 15 deaths. The total number of deaths occurring in 1889 was 11 less than in 1888.

With an estimated population of 67,026, the mortality for the year 1889, excluding still-births, was 19.17 per thousand living.

DIPHTHERIA.

There has been in Cambridge, in common with other places in this country and Great Britain, an increase in prevalence of diphtheria. There were during the year 351 cases, and 104 deaths, giving a case mortality of 29.6 per cent. The following was the distribution of the cases: Ward 1, cases, 31; Ward 2, cases, 72; Ward 3, cases, 59; Ward 4, cases, 104; Ward 5, cases, 85. As diphtheria is a very contagious disease, the most efficacious means for the limitation of its prevalence is strict isolation. This appears to be, in many instances, where the patients remain at home an impossibility. In 37 houses there were 2 cases each; in 15 houses, 3 cases; in 11 houses, 4 cases; in 1 house, 5 cases; in 2 houses, 6 cases. Being so contagious, and the milder forms being regarded sometimes as simple sore throat, great care should be used in allowing persons to use articles in common.

In some schools it is customary to interchange the books and pencils among the pupils. Every one must be familiar with the childish practice of putting the pencil in the mouth, and of wetting the finger with saliva to turn over the page of a book. This book, or pencil, passed to another child, may be the means of spreading disease. Sanitary inspection of the premises where the disease was most prevalent, showed them to be, in a great majority of instances, in a satisfactory condition. There was, however, a good deal of personal uncleanliness and disregard for the isolation of the cases.

TYPHOID FEVER.

Of the 200 cases reported during the year, 7 originated in other places, and should not be credited to Cambridge. There remain, therefore, 193 for consideration. 25 deaths occurred, giving a case mortality of 12.9 per cent. The distribution of the cases was as follows: Ward 1, cases, 31; Ward 2, cases, 59; Ward 3, cases, 67; Ward 4, cases, 23; Ward 5, cases, 13. Ward 3, where the largest number of cases occurred, is lined with privy vaults, many of them in a very offensive condition. But little improvement results from emptying them, as the ground in the immediate neighborhood is saturated with fæcal matter. In one section of this ward, comprising

an area of about 34 acres, there are 222 such privy vaults. Of 50 cases of typhoid fever reported in August, from the whole city, 28 were in this 34-acre area. Proceedings have been instituted which will, it is hoped, result in the passage of a law giving to cities of a certain population the power to order the abolition of privy vaults that are nuisances, or have become sources of danger to the public health.

SCARLET FEVER.

There were during the year 116 cases reported with the following distribution: Ward 1, cases, 18; Ward 2, cases, 33; Ward 3, cases, 30; Ward 4, cases, 23; Ward 5, cases, 12.

The number of deaths was 7, giving a case mortality of 6.03 per cent. In 9 houses there were 2 cases each, in 6 houses 3 cases each, in 1 house 4 cases.

To prevent misunderstanding with regard to the notification of diseases, a copy of the statute has been mailed to every physician in Cambridge whose address was known. Any one who has not received this circular can obtain one by application to the Board. It is important that the notification postal-cards should be mailed as early as is possible. There is frequently a difference of three days between the date of the card and the day of its receipt. In a number of instances the card and the undertaker's return have been received on the same day. Notification of diseases is a means to an end, and when the notification is delayed the efforts of the Board to prevent the spread of disease, by excluding from the public schools, the members of any household in which such disease prevails, is rendered to a great degree abortive. This is markedly the case with regard to scarlet fever and diphtheria, which are shown by some recent investigations to be little affected by insanitary conditions; but which are pre-eminently contagious diseases. When boards of health have isolation-hospitals at their disposal they may be able to take more effectual measures for the control of contagious diseases.

There occurred during the year 185 deaths from pulmonary consumption, of which number 146 were of persons between the ages of 15 and 55 years. Diarrhœal diseases destroyed 129 lives; 99 of this number being children under one year old.

An unfamiliar disease, or one which has temporarily increased, that causes a hundred deaths, is regarded with terror, while to another which sweeps away its thousands with unfailing certainty, scarcely a thought is devoted, so powerful is the contempt bred of familiarity. Diarrhœal diseases, the destroyers of infant life, and pulmonary consumption, the scourge of the flower of manhood, should, with the present knowledge of their causation, be among diseases distinctly amenable to preventive measures.

Surgeon-General Holt resigned his position of health officer last summer. The Board takes this opportunity to express its appreciation of his efficient services in that capacity during the past nine and a half years.

D. H. THURSTON,
H. P. WALCOTT,
WM. H. WHITNEY.

CITY OF CAMBRIDGE,
OFFICE OF BOARD OF HEALTH, Dec. 31, 1889.

To the Honorable City Council : —

GENTLEMEN: The following is the annual statement of the expenditures of this board during the financial year ending Nov. 30, 1889.

The appropriation for Health Department was		$3,500 00
The expenses were as follows :		
Analysis of sewage	$65 00	
Analysis of water	5 00	
Blank books	38 37	
Burying animals	57 00	
Burying bedding	2 00	
Car tickets	70 00	
Cow-pox points	26 12	
Directory	2 50	
Disinfectants	22 18	
Expressage	45	
Expenses of Medical Inspector at Session of American Public Health Association	16 64	
Glass jars	5 50	
Repairs on desk, and lock	3 50	
Printing	86 25	
Postage Stamps	22 50	
Salary, A. F. Holt, Health Officer, 7 months	875 00	
Salary, E. Farnham, Medical Inspector, 5 months	550 00	
Salary, C. S. Lincoln, Sanitary Inspector	966 66	
Salary, John McDuffie, Clerk	150 00	
Services, extra, in issuing burial permits	25 00	
		$2,989 67
Balance unexpended		$510 33

By direction of the Board of Health,

JOHN McDUFFIE,
Clerk.

CAUSES OF DEATH IN 1889.

ARRANGED ALPHABETICALLY.

DISEASES, &C.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Abscess	1	–	1	-	2	1	–	–	–	–	1	–	6
Accidents	1	2	–	2	3	3	3	3	4	3	1	-	25
Addison's Disease	–	–	–	1	-	–	–	–	–	–	-	–	1
Alcoholism	1	–	–	–	-	–	–	–	–	–	-	1	2
Anæmia	–	–	–	–	1	–	–	–	1	–	–	–	2
Apoplexy	–	1	3	3	2	3	5	1	3	2	1	3	27
Atrophy	3	3	3	4	4	7	14	7	10	8	4	6	73
Brain Diseases	–	4	2	1	–	1	1	1	1	7	–	1	19
Bright's Disease	–	1	5	2	5	1	4	3	1	5	5	7	39
Bronchitis	8	4	5	6	3	3	1	2	2	8	5	3	50
Cancer	2	1	9	5	-	2	7	5	4	3	1	5	44
Cerebro-Spinal Meningitis	–	1	1	–	1	–	–	1	–	1	-	-	5
Childbirth	–	1	1	–	1	–	–	–	–	–	–	-	3
Cholera Infantum	–	–	–	–	-	7	35	17	4	1	1	-	65
Cholera Morbus	–	–	–	–	-	–	3	2	–	–	-	-	5
Convulsions	2	2	6	2	3	1	1	2	2	2	3	4	30
Croup	2	1	–	–	–	–	1	–	–	1	1	1	7
Cyanosis	–	–	1	–	–	–	–	–	–	–	1	–	2
Cystitis	1	–	2	–	–	–	–	–	–	–	1	–	4
Diabetes	–	–	–	1	1	1	1	–	–	-	–	2	6
Diarrhœa	1	–	–	–	2	6	4	17	13	6	3	1	53
Diphtheria	6	6	6	6	9	12	9	9	4	13	12	12	104
Dropsy	1	–	1	–	–	–	–	–	–	-	-	–	2
Dysentery	–	–	–	–	–	–	2	2	2	–	–	–	6
Enteritis	–	–	1	1	–	–	-	–	–	-	-	-	2
Erysipelas	–	1	-	–	–	–	–	–	–	-	–	–	1
Fever, Scarlet	–	1	-	-	1	1	–	–	1	2	–	1	7
Fever, Typhoid	2	–	1	-	1	2	4	3	2	5	3	2	25
Fractures	–	-	1	-	–	–	–	-	1	2	–	-	4
Gangrene	–	–	–	-	1	–	–	-	2	–	–	-	3
Heart Disease	6	8	7	10	5	7	1	8	4	6	11	14	87
Hernia	–	–	–	1	–	–	–	–	–	1	-	-	2
Hemorrhage	–	–	–	3	–	–	1	–	-	–	-	1	5
Hydrocephalus	–	1	–	-	–	–	-	–	1	–	-	1	3

CAUSES OF DEATH, 1889 — *Concluded.*

Diseases, &c.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Insanity	-	-	-	-	-	-	-	-	-	-	1	1	2
Jaundice	-	1	-	1	-	1	-	-	-	-	-	-	3
Kidney Disease	1	-	-	-	-	-	-	-	-	-	-	-	1
Laryngitis	-	-	-	-	-	-	1	-	-	-	-	-	1
Liver Disease	1	-	-	2	1	-	-	1	-	-	3	1	9
Lung Disease	-	1	4	-	3	-	-	-	1	2	-	-	11
Measles	1	-	2	3	6	2	2	-	-	-	-	-	16
Meningitis	5	3	8	10	5	4	8	6	8	6	4	3	70
Nephritis	-	-	-	1	-	-	2	-	1	1	-	-	5
Occlusion of Intestines	-	-	1	1	1	1	-	-	-	-	1	-	5
Old Age	4	1	1	2	1	2	2	2	4	2	3	3	27
Paralysis	2	2	-	-	4	-	2	-	-	1	1	-	12
Perforation of Intestines	-	-	1	-	-	-	-	-	-	-	-	-	1
Peritonitis	-	2	1	1	3	-	2	3	-	2	-	1	15
Phthisis	16	21	13	13	15	17	15	16	14	13	15	17	185
Pleurisy	-	-	-	-	-	-	-	-	-	-	-	1	1
Pneumonia	9	3	7	9	12	5	2	8	2	6	10	14	87
Premature Birth	1	1	2	3	2	-	4	-	-	2	4	3	22
Purpura Hemorrhagica	1	-	-	-	-	-	-	-	-	-	-	-	1
Pyemia	-	-	1	-	1	-	-	-	-	-	-	-	2
Rheumatism	1	2	-	-	-	-	2	-	-	-	-	1	6
Septicæmia	-	-	-	-	-	-	-	-	1	-	-	1	2
Spina Bifida	-	-	-	-	-	-	-	-	-	-	-	1	1
Stillborn	4	5	3	8	6	11	5	6	4	4	9	6	71
Stomach Disease	-	-	-	-	-	-	1	2	-	-	1	-	4
Suicide	-	1	2	-	-	-	-	-	-	-	-	-	3
Surgical Operation	-	1	-	-	-	-	-	-	-	-	-	-	1
Syphilis	-	-	-	1	1	-	-	-	2	1	-	-	5
Tabes Mesenterica	-	-	-	-	-	-	-	-		1	-	-	1
Tumor	-	-	-	-	1	1	-	1		1	-	-	4
Ulceration of Intestines	-	-	-	-	2	1	-	1	-	-	-	-	4
Other Causes and Unknown	1	1	4	4	3	8	4	5	3	3	2	2	40
Whooping Cough	4	3	3	1	-	-	2	2		1	1	-	19
Totals	88	86	109	108	112	111	151	136	104	122	109	120	1356

CASES OF SCARLET FEVER, DIPHTHERIA AND TYPHOID FEVER REPORTED TO THE BOARD OF HEALTH FOR THE YEAR 1889.

Name of Disease.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.
Scarlet Fever	10	17	14	12	9	7	3	7	15	6	2	14	116
Diphtheria	34	18	18	24	22	34	30	29	12	35	48	47	351
Typhoid Fever	6	4	3	1	4	5	12	50	53	36	20	6	200
Totals	50	39	35	37	35	46	45	86	80	77	70	67	667

REPORT

OF THE

SEALER OF WEIGHTS AND MEASURES.

CAMBRIDGE, NOV. 30, 1889.

To the Honorable the City Council:—

I HAVE the honor to submit to you the annual report of the Department of Weights and Measures.

Appended is a table showing the number of weights and measures sealed during the year past, also for the years 1886, 1887, and 1888.

By this table it will be seen that the work in this department is increasing yearly.

The number of weights and measures sealed at this office for the year ending Nov. 30, was three hundred and four, while for the year previous it was but eight.

This increase is due largely to the fact that all hucksters, wherever and whenever found, have been requested to bring their measures to this office and have the same sealed; and a failure to comply with this request has been followed by prosecution.

Respectfully submitted,

B. OTIS DANFORTH,

Sealer of Weights and Measures.

Years.	Scales.			Weights.			Dry Measures.			Liquid Measures.			Yard Measures		Coal Baskets.		Milk Cans.		Totals.		
	Sealed.	Adjusted.	Condemned.	Sealed.	Adjusted.	Condemned.	Sealed.	Adjusted.	Condemned.	Sealed.	Adjusted.	Condemned.	Sealed.	Condemned.	Sealed.	Condemned.	Sealed.	Condemned.	Sealed.	Adjusted.	Condemned.
1886.	861	87		3,351	47	2	49	5		80	1		5						4,346	140	2
1887.	1,156	158	6	4,068	677	24	106	28	2	203	17	4	4						5,537	880	36
1888.	1,121	242	13	4,117	416	5	97	6	2	273	16	10	11						5,619	680	30
1889.	1,100	213	9	3,883	355	7	1,245	3	29	1,006	32	23	118	1	288	52	76	3	7,716	603	124

REPORT

OF THE

INSPECTOR OF MILK AND VINEGAR.

DEC. 1, 1889.

To the Honorable the Mayor and City Council of the City of Cambridge : —

GENTLEMEN : I respectfully submit the Annual Report of the Department for the Inspection of Milk and Vinegar for the year 1889.

No changes have been made in this department during the past year, and the work has been conducted in the same manner as described in my Annual Report, for 1888.

The total number of samples of milk collected and analyzed during the past year is 1,936, of which 1,625 were found to conform to the legal requirements for milk of good standard quality, as defined in the Public Statutes, and 311 were found on analysis not to so conform. Notices were sent to the persons found selling this inferior milk, warning them that they were liable to prosecution if they continued to sell milk of such poor quality, and six persons were prosecuted.

The following table shows the figures for the last five years :

	1885.	1886.	1887.	1888.	1889.
No. of samples collected . .	430	731	1,222	1,576	1,936
" " good samples . . .	328	624	960	1,402	1,625
" " poor " . . .	102	107	262	174	311
" " warnings sent . . .	102	107	257	165	265
" " prosecutions	0	6	10	5	6

The number of samples of vinegar purchased and analyzed during the past year is 96, of which 90 were sold as pure cider vinegar, and 6 as white wine vinegar. Of the samples of so-called cider vinegar, 75 were found to contain the required 2 per cent. of solid residue, and to have an acidity of 4.50 per cent., or over, and 20 were found to fail in one or the other of these requirements. All the samples of white wine vinegar were of standard quality. Notices were sent to those persons from whom the inferior samples were procured, warning them that they were liable to prosecution. No one was prosecuted.

The following table shows the figures for the last four years:

	1886.	1887.	1888.	1889.
No. of samples collected . .	91	94	79	96
" " good samples . . .	58	78	68	81
" " poor " . . .	33	16	11	20
" " warnings sent . . .	33	16	11	20
" " prosecutions	2	0	0	0

The addition of water, with some form of coloring matter, generally annotto, and skimming, constitute the usual adulterations found in the milk supply, as in former years; though in hot weather, some one of the milk preservatives, generally containing boracic acid as its active agent, is often added, to prevent too rapid souring.

As regards vinegar, most of that found not to conform to the legal requirements of cider vinegar is simply the ordinary manufactured article colored to represent cider vinegar, or often with a certain amount of cider vinegar added to improve its flavor. I have very seldom found any mineral acid in such samples, or anything which could be considered as directly injurious to health.

The number of milk licenses issued during the year was 274, of which 196 are annual licenses, issued to persons who sell milk from teams, or otherwise convey it to their customers; the rest are store licenses, which hold good so long as the

purchaser does business in the same place, and under the same name.

The amount received from these licenses was $137.00, which, together with $8.50 received from the sale of oleomargarine licenses, has been paid over to the City Treasurer.

There has been spent, for the purchase of samples of milk and vinegar, $66.56, and for chemicals, etc., $15.55.

I desire to bring to your notice again this year, the fact that, with the present facilities, I am unable to do anything towards collecting or analyzing samples of butter. There is evidently a considerable quantity of oleomargarine sold in this city, as shown by the number of licenses issued; but whether it is all sold as such, or as butter, I am quite unable to say.

Respectfully submitted,

FRANK A. DUNBAR, M. D.,

Inspector of Milk and Vinegar.

REPORT

OF THE

SUPERINTENDENT OF LAMPS.

City of Cambridge,
Office of Superintendent of Lamps,
Cambridge, Mass., Nov. 30, 1889.

To the Honorable the City Council: —

I have the honor to submit for your consideration the annual report of the Lamp Department.

Amount appropriated	$47,250 73
Amount expended	45,004 53
Balance unexpended	$2,246 20

The cost per lamp for all expenses of the department was:

For Arc Lights	$180 65
Incandescent Lights	31 77
Gas Lights	30 43
Kerosene Lights	15 70

Amount expended as follows:

For Electric Lighting	$20,941 77
Gas	13,695 20
Pay Roll for Lighters	7,786 13
Repairs	749 63
Oil and Matches	456 79
Glass, Paints, etc.	218 80
Carriage hire	192 50
Sundries	22 05
Superintendent	941 66
	$45,004 53

There are 293 1-2 electric lamps in use. Of this number 113 1-2 are arc, and 180 are incandescent lamps. 13 1-2 arcs, and 141 incandescent lamps have been added during the year. The latter have taken the place of the kerosene lamps which were located in what is commonly known as the Dublin District, and the marsh districts of East Cambridge and Lower Port. There are still quite a number of kerosene lamps in use in the Belmont and marsh districts of Wards One and Four. These lamps are in the hands of competent and faithful lighters, yet are very unsatisfactory lamps for the purpose of street lighting; and I would earnestly recommend that at as early a date as possible, they be discontinued, and incandescent lamps be located in place of the same. The total number of kerosene lamps now in use is 91.

The number of gas lamps now in use is 686. The gas lamps have been burned 2,397,688 hours, averaging 9 1-4 hours per day, an increase of 20,666 1-4 hours over that of last year, and consuming 82,665 more feet of gas. This may be accounted for from the fact that the lamps have burned all night on each and every night since the first day of May; and also by lighting the lamps earlier than has been the custom in years past. In May last, a new contract was entered into with the Cambridge Gas Light Company, for the period of one year. By terms of said contract the city is furnished with gas at one dollar and thirty-five cents per thousand feet, a reduction of fifteen cents per thousand on price of last year. The electric lamps are lighted soon after sunset, and are burned until dawn of day. The number of hours in which one or more electric lamps have failed to burn, is 6,561. These outages are reported by the police officers, and although the number of hours is less than that of last year, yet it is much in excess of what it should be, and it may reasonably be expected that a decided improvement in this system of lighting will be made, and that the number of outages be very much reduced.

One great source of trouble to this branch of the department, has been the crossing of wires, and in a number of instances this has resulted in certain districts being left in total darkness throughout the entire night. Whenever the placing of wires is put into the hands of a superintendent who will see that the

same are properly run, we may then reasonably expect that the number of outages will be greatly reduced.

The unexpended balance is somewhat larger than was looked for, as at the time of making up of the estimates for the appropriations, it was calculated that a large number of the incandescent lamps were to be in use at a much earlier period than has been the case. The delay was due in a great measure to the fact that the Electric Light Company have, at various times, been very much hindered by failure of the manufacturers to furnish them with wire, poles, and various articles needed.

Yours respectfully,

B. OTIS DANFORTH,
Superintendent of Lamps.

REPORT

OF THE

SCHOOL COMMITTEE.

In School Committee, Dec. 19, 1889.

Ordered, That the Superintendent prepare the annual report and present it to this Board for approval.

SANFORD B. HUBBARD,
Secretary.

In compliance with the above order the Superintendent herewith submits his fifteenth annual report, as the report of the School Committee for the year ending Dec. 31, 1889.

SUMMARY OF STATISTICS.

I.— Population.

Population of Cambridge by the State Census for 1885	59,660
Estimated population of Cambridge	70,000
Number of children in the city between five and fifteen years of age, May 1, 1889, as reported by the Truant-Officers	11,750

II.— Schools.

1 Latin School, with eight rooms.
1 English High School, with twelve rooms.
9 Grammar Schools, with one hundred twelve rooms.
23 Primary Schools, with one hundred rooms.
4 Kindergartens, with six rooms.
2 Evening Drawing Schools, with two rooms.
1 Evening High School, with six rooms.
2 Evening Schools, with six rooms.

Whole number of Day Schools	38
Whole number of separate rooms	238

III.— School-Houses.

For the Latin School	1
For the English High School	1
For the Grammar Schools	10
For both Grammar and Primary Schools	3
For the Primary Schools	20

IV.— Teachers.

Number of teachers in Latin School	10
Male teachers, 3; female teachers, 7.	
Number of teachers in English High School	14
Male teachers, 4; female teachers, 10.	
Number of teachers in Grammar Schools	118
Male teachers, 12; female teachers, 106.	
Number of teachers in Primary Schools	100
Number of teachers in Kindergartens	7
Number of teachers in Evening Drawing Schools, 1888–89	7
Average number of teachers in Evening Schools, 1888–89	21
Whole number of teachers* in Day Schools, including the teacher of music, the teacher of drawing, and the secretary and librarian of the High Schools	251
Number of teachers who have attended Normal Schools	164
Number of teachers who have graduated from Normal Schools	142

V.— Pupils.

ATTENDANCE AT ALL THE DAY SCHOOLS, 1885 to 1889.

Year.	Number of Pupils Registered.	Average Number Belonging.	Average Daily Attendance.	Per cent of Attendance.
1885	10,213	8,650	7,915	91.5
1886	11,012	9,246	8,530	92.2
1887	11,157	9,429	8,672	92.0
1888	11,496	9,756	8,964	91.9
1889	11,855	9,962	9,141	91.8

ATTENDANCE AT THE HIGH SCHOOLS, 1887 to 1889.

L. stands for Latin School, E. for English High School.

Year.	Number of Pupils Registered.	Average Number Belonging.	Average Daily Attendance.	Per cent of Attendance.
1887	L. 196 E. 351 } 547	L. 181 E. 318 } 499	L. 175 E. 302 } 477	L. 96.5 E. 95.1 } 95.6
1888	L. 247 E. 343 } 590	L. 228 E. 304 } 532	L. 217 E. 290 } 507	L. 95.1 E. 95.3 } 95.2
1889	L. 239 E. 397 } 636	L. 217 E. 345 } 562	L. 207 E. 331 } 538	L. 95.5 E. 96.1 } 95.8

*Temporary assistants and members of the training class are counted as seven teachers; the sum of their salaries being equal to the amount paid that number of regular teachers.

ATTENDANCE AT THE GRAMMAR SCHOOLS, 1885 to 1889.

Year.	Number of Pupils Registered.	Average Number Belonging.	Average Daily Attendance.	Per cent of Attendance.
1885	4,562	4,119	3,816	92.6
1886	5,121	4,440	4,152	93.5
1887	5,334	4,628	4,317	93.3
1888	5,421	4,760	4,427	93.0
1889	5,602	4,864	4,517	92.9

ATTENDANCE AT THE PRIMARY SCHOOLS, 1885 to 1889.

Year.	Number of Pupils Registered.	Average Number Belonging.	Average Daily Attendance.	Per cent of Attendance.
1885	5,152	4,069	3,664	90.0
1886	5,330	4,316	3,912	90.6
1887	5,276	4,301	3,877	90.1
1888	5,485	4,465	4,031	90.3
1889	5,617	4,537	4,086	90.0

NUMBER OF PUPILS GRADUATED FROM, AND ADMITTED TO, THE HIGH SCHOOLS AND THE GRAMMAR SCHOOLS, 1885 to 1889.

L. stands for Latin School, E. for English High School.

Year.	Graduated from High Schools.	Admitted to High Schools.	Graduated from Grammar Schools.	Admitted to Grammar Schools.
1885	72	239	303	1,103
1886	61	198	273	1,165
1887	L. 12 E. 49 } 61	L. 106 E. 145 } 251	319	1,123
1888	L. 22 E. 42 } 64	L. 69 E. 210 } 279	361	1,222
1889	L. 27 E. 52 } 79	L. 91 E. 272 } 363	419	1,168

NUMBER OF PUPILS BELONGING TO THE EVENING DRAWING SCHOOLS, WITH THE AVERAGE ATTENDANCE, 1885 TO 1889.

1885.	1886.	1887.	1888.	1889.
223	223	234	216	228
110	106	107	101	120

NUMBER OF PUPILS BELONGING TO THE EVENING SCHOOLS, WITH THE AVERAGE ATTENDANCE, 1885 TO 1889.

1885.	1886.	1887.	1888.	1889.
355	354	311	356	425
140	145	124	149	181

NUMBER OF PUPILS IN THE PRIVATE SCHOOLS IN CAMBRIDGE, INCLUDING THE PAROCHIAL SCHOOL, 1885 TO 1889.

1885.	1886.	1887.	1888.	1889.
1,865	1,858	1,651	1,785	2,037

TABLE SHOWING THE NUMBER IN EACH CLASS IN THE LATIN SCHOOL, DECEMBER, 1889.

Class.	Boys.	Girls.	Total.	Per cent.
First	13	7	20	.091
Second . . .	29	21	50	.229
Third	21	21	42	.191
Fourth . . .	19	14	33	.151
Fifth	37	37	74	.338
Total . . .	119	100	219	

TABLE SHOWING THE NUMBER IN EACH CLASS IN THE ENGLISH HIGH SCHOOL, DECEMBER, 1889.

Class.	Boys.	Girls.	Total.	Per cent.
First	14	30	44	.096
Second . . .	26	30	56	.123
Third	55	69	124	.274
Fourth . . .	82	149	231	.507
Total . . .	177	278	455	

TABLE SHOWING THE NUMBER IN EACH CLASS IN THE GRAMMAR SCHOOLS, DECEMBER, 1889.

Class.	Boys.	Girls.	Total.	Per cent.
First	191	237	428	.083
Second	309	349	658	.127
Third	385	419	804	.155
Fourth . . .	453	524	977	.188
Fifth	504	527	1,031	.199
Sixth	658	628	1,286	.248
Total . . .	2,500	2,684	5,184	

TABLE SHOWING THE NUMBER IN EACH CLASS IN THE PRIMARY SCHOOLS, DECEMBER, 1889.

Class.	Boys.	Girls.	Total.	Per cent.
First	609	612	1,221	.263
Second . . .	668	645	1,313	.283
Third . . .	1,133	977	2,110	.454
Total . . .	2,410	2,234	4,644	

SUMMARY OF THE SCHOOL CENSUS, AS TAKEN BY THE TRUANT OFFICERS, MAY, 1889.

[The Statutes make it the duty of the School Committee annually to ascertain the names and ages of all persons belonging to their respective towns and cities on the first day of May, between the ages of five and fifteen years.]

Number of children in the city five years old or more, but less than fifteen	11,750
Number in Public Schools five years old or more, but less than fifteen	9,505
Number in Public Schools fifteen years old or more, as shown by the school register	994
Number in Private Schools five years old or more, but less than fifteen	1,246
Number not attending school five years old or more, but less than eight	636
Number not attending school eight years old or more, but less than fourteen	160
Number not attending school fourteen years old or more, but less than fifteen	203
Whole number not attending school five years old or more, but less than fifteen	999
Number in the city five years old or more, but less than six	1,026
Number eight years old or more, but less than fourteen	7,250

VI.—Finances.

[For the financial year ending Dec. 1, 1889.]

Instruction in day schools	$180,816 26
Cost of evening schools	2,874 00
Cost of evening drawing schools	1,086 00
Text-books and supplies for day and evening schools	12,940 85
Incidental expenses	665 34
Care and repairs of school-houses	36,089 32
Expended on the new High School-House	4,654 35
Expended on the Putnam School-House	14,400 00
Expended on the Peabody School-House	21,716 00
Land for new school-house in Ward 4	6,000 00
Total expenditures for all school purposes	$281,242 12
Deducting receipts from the Hopkins Fund ($761.48) and for tuition of non-resident pupils ($254.00), actual cost of the schools to the city	$280,226 64
Assessed value of real and personal estate, May, 1889	65,132,800 00
Ratio of expenses for school purposes to the valuation of 1889	.004

COST OF INSTRUCTION IN THE DAY SCHOOLS, 1876 TO 1889.

[Salaries of teachers, superintendent, agent, and truant officers.]

Year.	Whole Cost.	Average Number of Pupils.	Cost per Pupil.
1876	$164,818 00	7,066	$23 32
1877	151,946 65	7,139	21 28
1878	136,491 20	7,028	19 42
1879	132,570 49	6,957	19 05
1880	130,371 75	7,175	18 17
1881	132,501 10	7,434	17 82
1882	137,328 55	7,898	17 38
1883	144,457 60	8,194	17 63
1884	152,290 62	8,414	18 09
1885	158,640 13	8,650	18 33
1886	165,277 42	9,218	17 92
1887	172,135 06	9,429	18 25
1888	175,773 80	9,756	18 02
1889	180,816 26	9,962	18 15

COST OF THE DAY SCHOOLS, 1876 TO 1889.

[The expenditures for new school-houses are not included.]

Year.	Whole Cost.	Average Number of Pupils.	Cost per Pupil.
1876	$200,894 09	7,066	$28 43
1877	180,974 36	7,139	25 35
1878	162,437 77	7,028	23 11
1879	158,196 21	6,957	22 73
1880	153,967 56	7,175	21 45
1881	158,282 84	7,434	21 29
1882	166,230 52	7,898	21 04
1883	177,149 93	8,194	21 62
1884	203,234 56	8,414	24 15
1885	206,806 09	8,650	23 90
1886	207,536 46	9,218	22 51
1887	222,679 19	9,429	23 61
1888	225,408 57	9,756	23 10
1889	229,421 31	9,962	23 03

STATISTICS TAKEN FROM THE FIFTY-THIRD ANNUAL REPORT OF THE SECRETARY OF THE STATE BOARD OF EDUCATION.

Number of cities and towns: cities, 25; towns, 326	351
Number of public schools	7,023
Number of pupils of all ages in the public schools during the year	363,166
Number of persons over fifteen years of age attending the public schools	30,758
Per cent. of attendance based upon the average membership	90
Number of persons employed as teachers in the public schools during the year: men, 901; women, 9,222; total	10,123
Number of teachers who have graduated from Normal Schools	2,689
Average number of months the public schools have been kept for the entire year	8.11
Number of High Schools	236
Number of teachers in High Schools	756
Number of pupils in High Schools	24,139
Amount expended upon the public schools, exclusive of the expense of school buildings	$6,203,390.55
Cost of new school-houses, permanent improvements, and ordinary repairs	1,307,328.30
Entire expenditure for public school purposes	7,510,718.85

SPECIAL INSTITUTIONS.

The following are the statistics of the attendance and expenses of the Massachusetts pupils in the several schools for the deaf and the blind.

AMERICAN ASYLUM AT HARTFORD, CONN.

Number of Massachusetts pupils	63
Paid for these pupils	$7,056.79

CLARK INSTITUTION, NORTHAMPTON.

Number of Massachusetts pupils	79
Paid for these pupils	$9,778.12

HORACE MANN SCHOOL, BOSTON.

Number of Massachusetts pupils	73
Paid for these pupils	$9,127.37

PERKINS INSTITUTION FOR THE BLIND.

Number of Massachusetts pupils	134
Annual appropriation from the State	$30,000.00

CITIES OF MASSACHUSETTS ARRANGED ACCORDING TO THE PERCENTAGE OF THEIR TAXABLE PROPERTY APPROPRIATED TO THE SUPPORT OF THE PUBLIC SCHOOLS.

For 1888-89, by the State Valuation of 1888.	Cities.	Percentage of Valuation appropriated to Public Schools — equivalent to mills and hundredths of mills.	For 1888-89, by the State Valuation of 1888.	Cities.	Percentage of Valuation appropriated to Public Schools — equivalent to mills and hundredths of mills.
1	Waltham	.004-24	14	Newton	.003-23
2	Gloucester	.003-99	15	Taunton	.003-22
3	Quincy	.003-91	16	Cambridge	.003-17
4	Haverhill	.003-78	17	Fall River	.003-17
5	Woburn	.003-68	18	Northampton	.003-14
6	Holyoke	.003-64	19	Salem	.003-09
7	Malden	.003-50	20	Lowell	.003-01
8	Fitchburg	.003-43	21	New Bedford	.002-81
9	Somerville	.003-43	22	Springfield	.002-70
10	Lynn	.003-35	23	Lawrence	.002-69
11	Chelsea	.003-33	24	Newburyport	.002-24
12	Brockton	.003-32	25	Boston	.001-96
13	Worcester	.003-32			

TOWNS AND CITIES OF MIDDLESEX COUNTY.

For 1888-89, by the State Valuation of 1888.	Towns and Cities.	Percentage of Valuation appropriated to Public Schools — equivalent to mills and hundredths of mills.	For 1888-89, by the State Valuation of 1888.	Towns and Cities.	Percentage of Valuation appropriated to Public Schools — equivalent to mills and hundredths of mills.
1	Marlborough	.004-94	28	Hopkinton	.003-34
2	Westford	.004-51	29	Pepperell	.003-34
3	Natick	.004-43	30	Wilmington	.003-32
4	Holliston	.004-32	31	Shirley	.003-31
5	Stoneham	.004-29	32	Sherborn	.003-28
6	Waltham	.004-24	33	Newton	.003-23
7	Ashby	.004-07	34	Boxborough	.003-21
8	Hudson	.004-05	35	Cambridge	.003-17
9	Wakefield	.004-00	36	Maynard	.003-16
10	Medford	.003-94	37	Watertown	.003-16
11	Reading	.003-84	38	Lexington	.003-07
12	Arlington	.003-78	39	Lowell	.003-01
13	North Reading	.003-77	40	Tyngsboro'	.002-98
14	Ashland	.003-73	41	Dunstable	.002-74
15	Ayer	.003-73	42	Weston	.002-74
16	Woburn	.003-68	43	Bedford	.002-69
17	Concord	.003-64	44	Belmont	.002-59
18	Winchester	.003-63	45	Carlisle	.002-47
19	Melrose	.003-62	46	Dracut	.002-44
20	Townsend	.003-56	47	Billerica	.002-42
21	Malden	.003-50	48	Stow	.002-42
22	Wayland	.003-45	49	Burlington	.002-32
23	Framingham	.003-44	50	Tewksbury	.002-17
24	Somerville	.003-43	51	Sudbury	.001-99
25	Acton	.003-40	52	Groton	.001-88
26	Littleton	.003-40	53	Lincoln	.001-57
27	Chelmsford	.003-34	54	Everett	.001-37

TABULAR VIEW.

JANUARY 1, 1890.

Prepared by the Secretary of the School Committee.

Names of Schools.	Teachers.	Salaries.	No. of Scholars Jan. 1, 1890.
Latin School.	William F. Bradbury...	$3,000	219
	Theodore P. Adams....	2,000	
	Charles W. Parmenter..	1,500	
	Helen M. Albee.....	950	
	Charlotte C. Barrell....	950	
	Marion Bradbury.....	950	
	Caroline Drew.....	450	
	Margarette M. Leighton	950	
	Emma M. Sawyer.....	800	
	Jennie S. Spring.....	950	
English High.	Frank A. Hill.....	3,000	455
	Edwin L. Sargent.....	2,000	
	Charles H. Morse.....	1,500	
	Charles F. Warner.....	1,500	
	Clara A. Armes.....	950	
	Harriet E. Bird.....	950	
	Carrie Close.....	950	
	Myra I. Ellis.....	800	
	Louisa P. Parker.....	950	
	Caroline A. Sawyer....	950	
	Emma A. Scudder.....	950	
	Martha R. Smith.....	950	
	Maria E. Spare.....	950	
	Delia Stickney.....	1,050	
Allston.	Benjamin W. Roberts..	2,000	581
	Mary Moulton.....	700	
	Susan M. Adams.....	570	
	Sara A. Bailey.....	620	
	Mary Blair.....	620	
	Mary M. Brigham.....	620	
	Hattie B. Johnson.....	620	
	Evelyn B. Kenney.....	620	
	Celia F McFarland....	620	
	Melissa M. McKinley...	620	
	Emily R. Pitkin.....	620	
	Ida G. Smith.....	620	
	Carrie M. Williams....	620	
Harvard.	James S. Barrell.....	2,000	760
	Arthur A. Lincoln.....	1,000	
	Ada H. Wellington.....	700	
	Margaret B. Wellington	700	
	Theresa C. Bartlett....	620	
	Elizabeth L. Buckley...	400	
	Susan F. Athearn.....	620	
	Emily F. Damon.....	620	
	Ella S. Danforth.....	620	
	Mary F. Emerson.....	620	
	Frances Fabyan.....	620	
	Estelle J. French.....	620	

TABULAR VIEW—*Continued.*

Names of Schools.	Teachers.	Salaries.	No. of Scholars Jan. 1, 1890.
Harvard.	Eliza S. Getchell.....	$ 620	
	Cora E. Hosmer.....	620	
	Etta M. Houghton.....	620	
	Annie M. Street.....	520	
	Hortense O. Young....	620	
Peabody.	Frederick S. Cutter....	1,500	249
	Susan Allison.....	400	
	Anna F. Bellows.....	570	
	Addie F. Cleary.....	400	
	Charlotte A. Ewell.....	620	
	Mary E. Patterson.....	570	
Putnam.	Thomas W. Davis.....	2,000	557
	Frederick W. Eveleth..	1,000	
	Eliza M. Hussey.....	700	
	Ella R. Avery.....	620	
	Annetta Bruce.....	620	
	Lydia B. Collier.....	520	
	Anna M. Dormer.....	620	
	Sarah M. Grieves.....	620	
	Annie B. Josselyn.....	620	
	Louise A. Keeler.....	620	
	Augusta G. Mirick....	620	
	Eliza S. Paddack.....	620	
	Mary M. Sullivan.....	570	
Shepard.	Edward O. Grover.....	2,000	472
	Nellie A. Hutchins....	700	
	Mary A. Bosworth.....	620	
	Harriet V. Dever.....	520	
	Emma A. Falkner.....	620	
	Emily F. Fessenden....	620	
	Harriet Foster.....	620	
	Ellen J. Hunt.....	620	
	A. Estelle Ingraham...	620	
	Flora C. Ingraham.....	620	
	Evelyn J. Locke.....	620	
	Clara A. Peterson.....	620	
Thorndike.	Ruel H. Fletcher.....	2,000	564
	Harriet A. Townsend..	700	
	Emma F. Cogan.....	520	
	Grace W. Fletcher.....	620	
	Emma A. Hopkins.....	620	
	Abby A. K. Howard...	620	
	Elizabeth G. Hutchinson	620	
	Martha A. Martin.....	620	
	Mary E. Nason.....	620	
	S. Louise Regal.....	620	
	Abby S. Taylor.....	620	
	Laura S. Westcott.....	620	
	Lydia A. Whitcher....	620	
Washington.	John W. Freese.....	2,000	568
	Annie E. Whittier.....	700	
	Eldora J. Clark.....	620	
	Lucy A. Downing.....	620	
	Mary L. Ells.....	620	
	Alice P. Fay.....	470	
	Adeline M. Ireson.....	620	
	Adelaide A. Keith.....	620	
	Winifred L. Kinsley...	470	

TABULAR VIEW — *Continued.*

Names of Schools.	Teachers.	Salaries.	No. of Scholars Jan. 1, 1890.
Washington.	Margaret J. Penney.....	$ 620	
	Hattie Shepherd.....	620	
	Mary E. Stiles.....	620	
	Abby M. Webb.....	620	
Webster.	John D. Billings.....	2,000	831
	Arthur N. Whitney.....	1,000	
	Mary E. Towle.....	700	
	Esther F. Hannum.....	700	
	Ada A. Billings.....	520	
	Ella E. Buttrick.....	620	
	Florence B. Chandler....	620	
	Charlotte M. Chase.....	620	
	Annie Marion Dow.....	520	
	Susan I. Downs.....	570	
	Nellie C. Duley.....	520	
	Josie F. Lamprey.....	620	
	Anna S. Lamson.....	620	
	Georgia E. Lancaster....	620	
	Gertrude A. Long.....	570	
	Clara E. Matchett.....	620	
	Alice C. Phinney.....	620	
	Minnie V. Reid.....	470	
	Mary A. Townsend.....	620	
Corlett.	Fannie P. Browning.....	630	92
	Sarah E. Clark.....	620	
Agassiz. { Grammar. Primary.	Maria L. Baldwin.....	650	{ 91 169
	Mary G. Carpenter.....	620	
	Emma A. Child.....	620	
	Augusta M. Houghton....	620	
	Rosina C. Karcher.....	620	
	Gertrude E. Sackrider....	400	
Boardman.	Mary A. Lewis.....	660	338
	Christine R. Denyven....	520	
	Mary Alice Gregg.....	520	
	Nellie E. Hastings.....	570	
	Elizabeth J. Karcher.....	620	
	C. Florence Smith.....	520	
	Sarah E. Stewart.....	620	
Bridge.	Elizabeth E. Dallinger....	630	92
	Emily C. Dallinger.....	620	
Cushing.	Isadore I. Foster.....	630	78
	Ida B. Holt.....	620	
Dana.	Maria F. Williams.....	640	158
	Emily J. Allen.....	520	
	Cordelia J. French.....	620	
	Abby A. Lewis.....	620	
Dunster.	Susan E. Wyeth.....	640	126
	Nellie M. Colby.....	620	
	Lizzie B. Shepherd.....	620	
Felton.	Sarah J. Gunnison.....	640	182
	Louise M. Britton.....	470	
	Fanny C. Hartwell.....	620	
	Minnie F. Munroe.....	620	
Gannett.	Sarah J. A. Davis.....	640	171
	Anna M. Jones.....	620	
	Mary A. Rady.....	620	

TABULAR VIEW—*Continued.*

Names of Schools.	Teachers.	Salaries.	No. of Scholars Jan. 1, 1890.
Gannett.	Carrie H. Smith.....	$ 620	
Gore.	Frances E. Pendexter..	670	441
	Addie M. Bettinson....	620	
	Anna E. Callahan.....	620	
	Mary A. Carmichael....	400	
	Elizabeth B. Gahm....	620	
	Katie L. McElroy.....	470	
	Mary C. McNally.....	470	
	Mary E. Mulloney.....	620	
	Emma J. Ross.....	570	
	Louise A. Stickney....	620	
Holmes.	Marianne M. Webb....	635	106
	Ellen M. Cyr.....	620	
	Isabel Foster.....	620	
Lassell.	Nellie F. Ball.....	640	224
	Rose V. Collier.....	470	
	Sarah J. Fahy.....	400	
	Cora A. Reycroft.....	620	
	Frances E. Whoriskey..	620	
Lowell.	Winona Abercrombie...	630	90
	Lucy E. Cyr.....	620	
Mason.	M. Lizzie Evans.....	630	113
	Lizzie J. Baldwin.....	620	
Otis.	Luvia Goodnow.....	660	404
	Fannie Allen.....	620	
	Martha H. Butler.....	620	
	Josephine M. Doherty..	620	
	Ellen N. Leighton.....	620	
	Luella M. Marsh.....	620	
	Ellen C. Walsh.....	620	
	Kate F. Wellington....	620	
Quincy	Charlotte E. Jewell....	630	85
	Lucy C. Wyeth.....	620	
Reed.	Margaret Kidd.....	640	218
	Margaret T. Burke.....	470	
	Harriet N. Keyes.....	620	
	Julia A. Robinson.....	520	
Riverside.	Elizabeth A. Tower....	635	131
	Amanda M. Alger.....	620	
	Mary A. Burke.....	620	
Sargent.	Mary A. Brown.....	640	182
	Christina D. Barbey....	620	
	Thyra C. Kalberg.....	470	
	Ella M. Leaver.....	520	
Stearns.	Helen M. Ward.....	640	181
	Maria J. Bacon.....	620	
	Ellen A. Cheney.....	620	
	Eva A. Taylor.....	570	
Tarbell.	Emma J. Young.....	640	199
	Mary A. Davis.....	570	
	Nellie F. McCarthy....	620	
Willard. { Grammar.	Amelia Wright.....	680	{ 102
Willard. { Primary.			{ 318
	S. N. Chamberlain.....	620	
	Belle F. Gulliver.....	570	
	Julia S. Gushee.....	620	
	Mary E. G. Harrington.	620	
	Louise W. Harris.....	620	

TABULAR VIEW—*Continued.*

Names of Schools.	Teachers.	Salaries.	No. of Scholars Jan 1, 1890.
Willard.	Kate M. Lowell.....	620	
	S. Agnes Mulloney.....	520	
	Emma C. Otis.....	620	
	Mary E. Sawyer.....	620	
	Eliza D. Watson.....	570	
	Grace R. Woodward....	620	
	Laura Wright.....	620	
Wyman.	Fannie E. M. Dennis...	645	221
	M. Carrie Dickman.....	620	
	Georgiana B. Dutcher..	620	
	Cyrene L. Flint.....	400	
	Mary M. Gilman.....	620	
Wellington { Gram. / Prim.	Herbert H. Bates.....	2,000	{ 317 / 217
	Lelia A. Mirick.....	800	
	Training Class.....	3,000	
Kindergartens. Boardman.	Caroline C. Voorhees..	620	63
	Selma E. Berthold.....	520	
Dunster.	Helen Willson.....	620	31
Holyoke St.	Ellen I. Hutchinson....	620	60
	Linda Gates.....	520	
Moore St.	Harriet E. Ryan.....	620	55
	Mabel Eddy.....	520	

TEACHER OF SINGING—Nathan Lincoln	$1,700
DIRECTOR OF DRAWING—Walter F. Brackett . . .	1,700
SECRETARY AND LIBRARIAN OF THE HIGH SCHOOLS—	
Mattie L. Babbitt	500
SUPERINTENDENT—Francis Cogswell	3,000
AGENT—Sanford B. Hubbard	1,500

The Wellington School is a training school, composed of grammar and primary pupils, taught by young ladies, graduates of Normal Schools and candidates for the office of teacher, under the direction and with the assistance of the master of the school and his assistant.

Temporary assistants and members of the Training Class are counted as seven teachers, the sum of their salaries being about equal to the amount paid to that number of regular teachers.

The post-office addresses of the several schools are as follows :—

CAMBRIDGE—Peabody,* Washington,* Agassiz, Dunster, Holmes, Lowell, Quincy, Riverside.

CAMBRIDGEPORT—Latin, English High, Allston,* Harvard,* Webster,* Boardman, Bridge, Dana, Felton, Gannett, Mason, Sargent, Stearns, Tarbell, Wellington, Willard.

EAST CAMBRIDGE—Putnam,* Thorndike,* Gore, Lassell, Otis.

NORTH CAMBRIDGE—Shepard,* Reed, Wyman.

MOUNT AUBURN—Corlett,* Cushing.

*Grammar Schools.

SUMMARY.

Number of pupils in Latin School	219
Number of pupils in English High School	455
Number of pupils in Grammar Schools	5,184
Number of pupils in Primary Schools	4,644
Number of pupils in Kindergartens	209
	10,711
Number of pupils belonging to the Public Schools, Jan. 1, 1889	10,462
Increase	249

Average annual increase of pupils from 1860 to 1880 (inclusive)	219
Increase of pupils, 1881	403
Increase of pupils, 1882	448
Increase of pupils, 1883	280
Increase of pupils, 1884	165
Increase of pupils, 1885	589
Increase of pupils, 1886	267
Increase of pupils, 1887	371
Increase of pupils, 1888	173
Increase of pupils, 1889	249

Number of Schools	38
Number of School-rooms	238
Number of Teachers	251

COST OF INSTRUCTION.

Latin School	$12,555 00	For each pupil	$57 78
English High School	16,157 96	" " "	35 51
Grammar Schools	81,862 20	" " "	15 79
Primary Schools	60,078 10	" " "	12 93
Kindergartens	1,430 00		
Substitute Teachers	105 00		
Teacher of Singing	1,700 00		
Director of Drawing	680 00		
Superintendent	3,000 00		
Agent	1,500 00		
Truant Officers	2,700 00		
	$181,768 26	For each pupil	$16 97

Cost of instruction in Evening Schools	$2,102 00
Cost of instruction in Drawing Schools	1,230 00

REMARKS ON THE STATISTICS.

The increase over the last school year in the number of pupils registered is 359; in the average number belonging, 206; in the average daily attendance, 177. In the per cent of attendance there has been a decrease of one-tenth of one per cent. The number belonging to the schools in December, 1888, was 10,462; in December, 1889, 10,711; an increase of 249. A part of this increase is due to the incorporation of the kindergartens into the school system. Connected with these schools on the first of December there were 209 pupils. Had these not been included, the increase would have been only 40; but this number would not have shown the increase in the school population, for on the opening of the Parochial School in Ward 1, about 150 pupils were withdrawn from the public schools. The entire cost of the day schools, excluding the expenditure for new school-houses and new furniture, exceeds that of last year by $4,012.74, while the cost per pupil is less by 7 cents. In the entire cost of instruction the increase is $5,042.46; an increase in the cost per pupil of 13 cents. While Cambridge expends a large amount for her schools, there are *two hundred and twenty-eight* towns and cities in the State which make a larger expenditure in proportion to their wealth. In a list of the twenty-five cities, arranged numerically according to the percentage of their taxable property appropriated to the support of public schools for the year 1888–89, Cambridge is the *sixteenth*, and compared with the fifty-four towns and cities of our county, Cambridge is the *thirty-fifth*. In a list of the towns and cities of the State, arranged numerically according to the sum appropriated for each child between five and fifteen years of age, Cambridge is the *forty-second*.

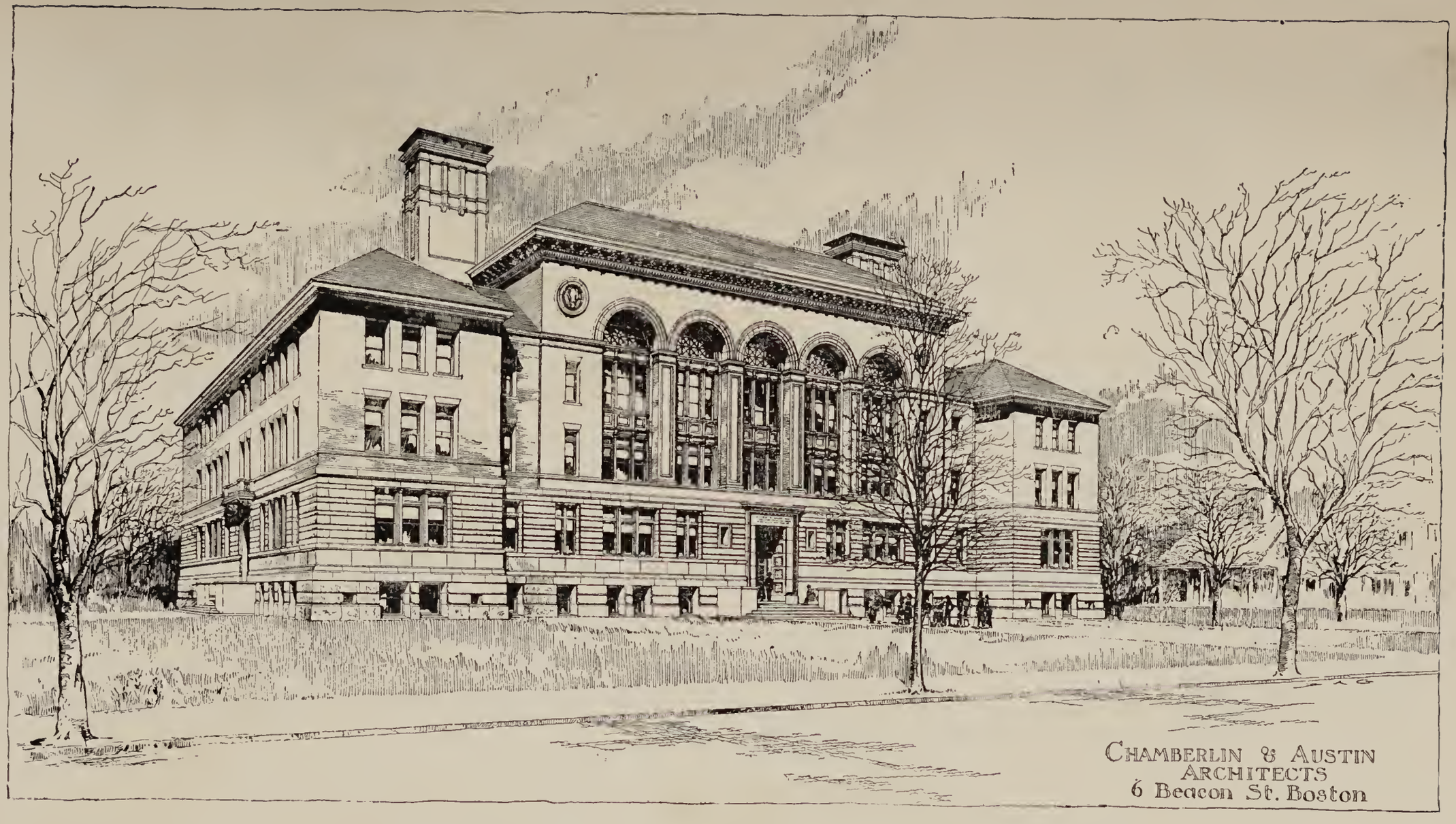
These statistics relating to the schools of the State are taken from the fifty-third annual report of the Secretary of the Board of Education.

SCHOOL ACCOMMODATIONS.

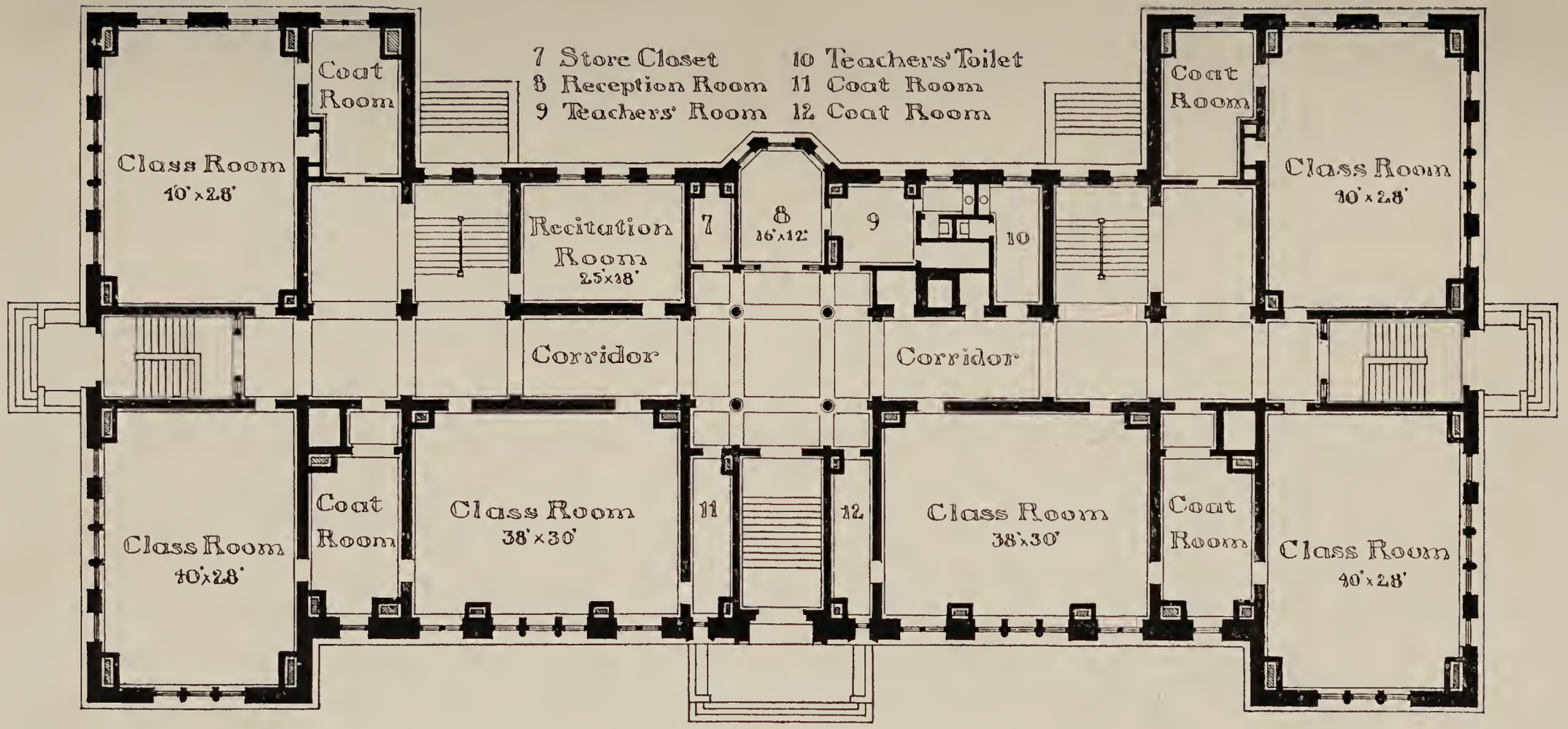
The new English High School building is now under contract. It is to stand near the Library building and the Manual Training School building on land given by Mr. Rindge. The foundation walls are already laid, and the building is to be completed by August, 1891. Its entire cost will be about two hundred thousand dollars. The plans are by the well-known architects, Messrs. Chamberlin and Austin, of Boston, and the contractors are Messrs. Giddings and Son, of Somerville. Much thought has been given to these plans. The architects have bestowed upon them an unusual amount of time. The Committee on Public Property of the City Council, and a special committee of the School Board, and the master of the school, have spent many days in visiting other cities in order that the best features found in the best school-houses elsewhere might be embodied here.

The building will be about two hundred feet long, one hundred feet wide, and three stories high. The first story will be of buff Ohio stone; the second and third of light-red Perth Amboy brick, except the cornices, which will be of stone. The roof will be slated. The construction of the floors will be what is known as "mill construction." The staircases will be of iron, and the first story corridors will be tiled with marble. The building will be heated with steam by indirect radiation, Messrs. Ingalls and Kendricken, of Boston, being the contractors. The ventilation will be through large brick shafts heated at the top, the several rooms being connected with these shafts by metallic pipes. The plans here inserted show the appearance of the building, the arrangement of the rooms, their size, and the uses for which they are designed.

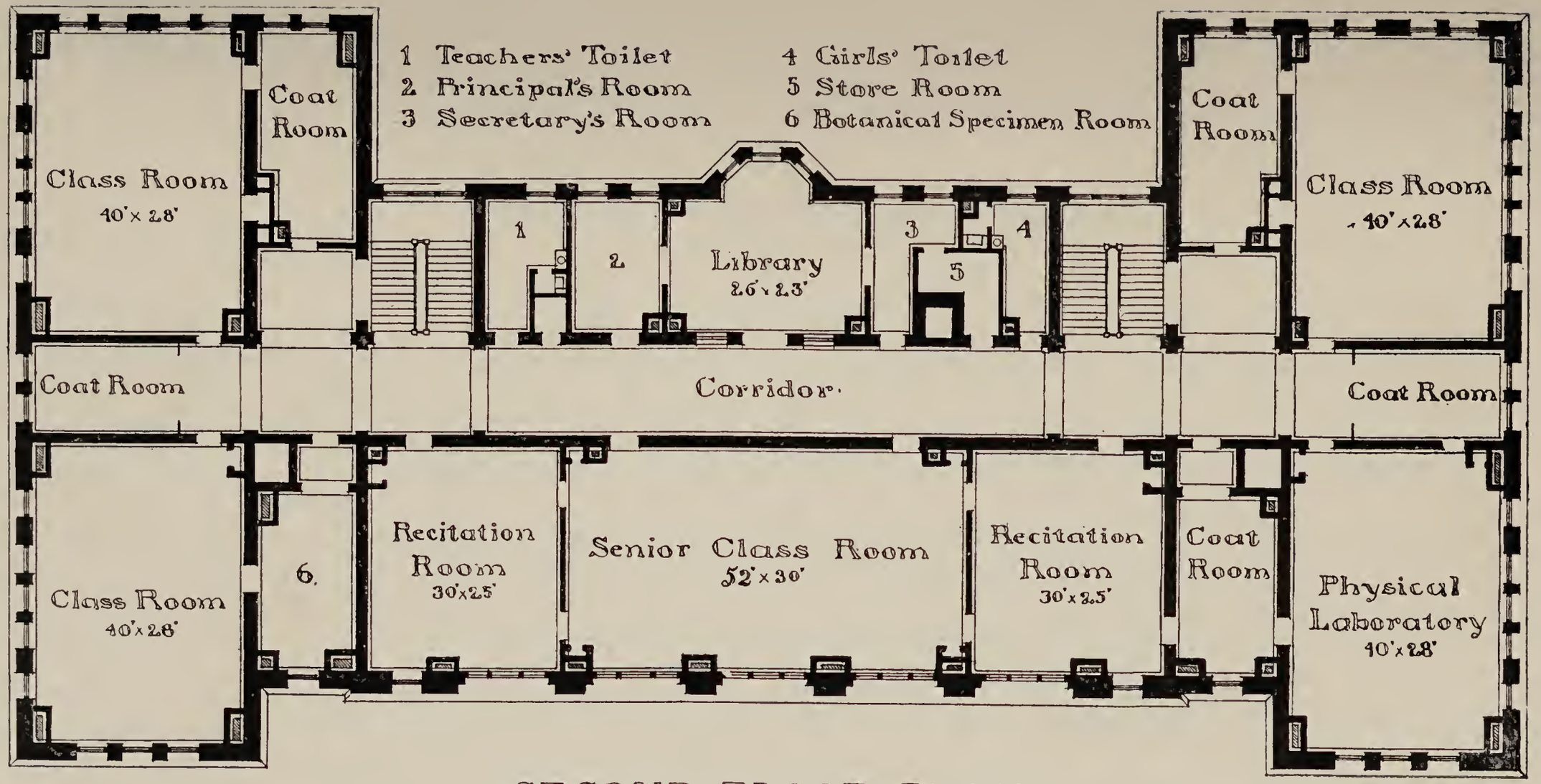
The Peabody school-house on Linnæan Street, or rather a section of it, was completed in season to be occupied at the opening of the schools in September. This section contains six school-rooms 32 feet by 30. The building as planned will have fourteen school-rooms, and a hall with all the conveniences and improvements found in modern school-houses. The amount already expended is $27,000. This school is named for the Rev. Andrew P. Peabody, D. D.



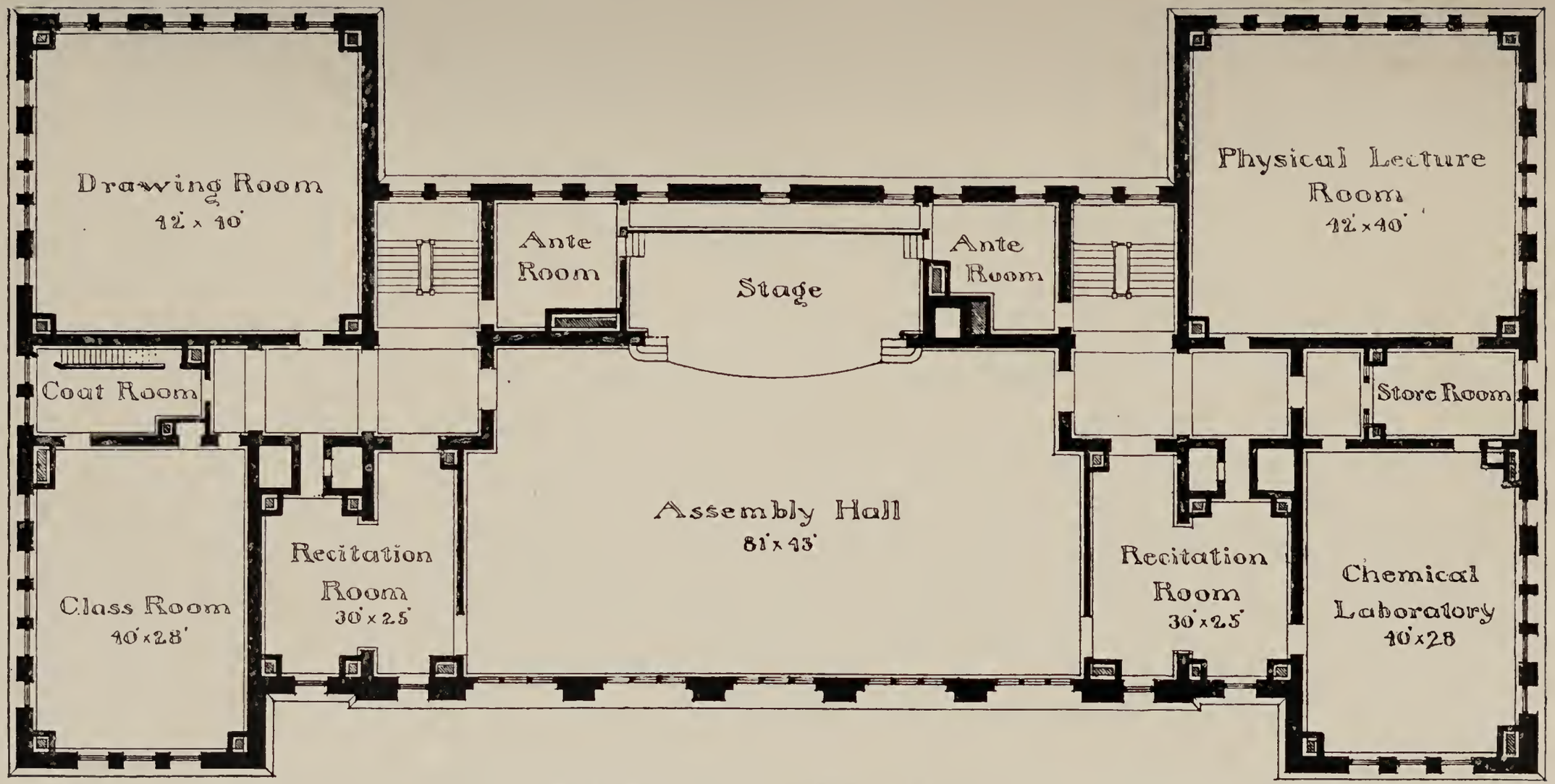
THE NEW ENGLISH HIGH SCHOOL BUILDING, CAMBRIDGE.



FIRST FLOOR PLAN



SECOND FLOOR PLAN



THIRD FLOOR PLAN

The needs of the schools in regard to accommodations were fully set forth in the last annual report. It is now unnecessary to restate them, for by the action of the City Council two of the buildings, for the English High School and for the Putnam School, are in process of erection, and plans have already been ordered for the third building, that for Ward Four. With the completion of these buildings it is expected that the accommodations will be sufficient for two or three years. The present English High School building, however, before it is used for the Latin School, should be thoroughly repaired and provided with a complete system of ventilation.

CHANGES IN THE CORPS OF TEACHERS.

Resignations and appointments have been as follows:

Latin School — 1 resignation, 1 appointment.
English High School — 0 resignation, 2 appointments.
Grammar Schools — 10 resignations, 13 appointments.
Primary Schools — 6 resignations, 5 appointments.
Kindergartens (beginning in September)—7 appointments.

The resignations and appointments here given are those of a permanent character. Teachers out of school on leave of absence, and those appointed to take their places, are not included in these numbers. By these resignations the city has lost the services of several teachers of long and successful experience.

TEXT-BOOKS AND SUPPLIES.

At the meeting of the Board in December, the Committee on Supplies submitted a detailed report of the expenditures of that Committee for the year.

This report was accepted, and it was voted that it be incorporated in the annual report of the School Committee. The report, with the omission of the names of the firms and individuals among whom the expenditures were divided, is as follows:

The Committee on Supplies begs leave to submit the following report of its doings for the school year ending July 2, 1889:

Stock on hand, July 3, 1888		$1,731 83
Purchases and expenditures to July 2, 1889		10,702 99
Total		$12,434 82
Delivered to the Overseers of the Poor	$40 04	
Sold for cash to pupils	81 89	
Delivered to Schools and Officers	10,203 50	10,325 43
Stock on hand, July 2, 1889		$2,109 39

The purchases and expenditures have been:

For text-books	$3,989 72
Miscellaneous supplies	3,399 65
Desk and reference books	533 59
Apparatus and furnishings	925 65
Drawing and writing books	1,229 11
Printing ($257.70); expressage ($171.66)	429 36
Diplomas ($97.58); repairing books ($87.83)	185 41
Tuning pianos	10 50
	$10,702 99

The cost of each grade of schools for text-books and supplies, after deducting the amount received for books sold and for damages collected, is as follows:

	Net Expense.	Average per pupil.		
		1888-89.	1887-88.	1886-87.
High Schools	$2,408.27	$4.054	$3.944	$3.842
Grammar Schools	5,043.27	1.071	1.367	1.363
Mixed Schools	590.12	0.746	0.953	0.736
Primary Schools	1,193.64	0.276	0.240	0.197
Evening Schools	365.46			
Miscellaneous Expenses [Expressage, Printing, etc.]	438.71			
	$10,039.47	$0.960	$1.068	$1.05

This shows a decrease from last year of ten cents and eight mills per pupil, and is the lowest average that the Committee has been able to show during the five years the free text-book law has been in force.

The average cost per pupil for the whole five years has been $1.226, and it seems safe to say that the yearly average hereafter can hardly be expected to fall below this figure. For the current year we may expect to see this figure exceeded, because many books were left in the schools which would have been discarded as unfit for further use and have been replaced by new, had our appropriation been large enough to allow such action; and these must, of necessity, increase by just so much the expenses of the current year.

As stated above, the expenditures during the past school year for text-books were a trifle under $4,000, while the expenditures so far this year have already reached $3,000.

The number of books discarded last year was 6,007, and the total number discarded during the five years has been 8,530. Of those discarded last year, 3,873 were Readers, all of which have been used as exchanges in part payment for the new books supplied in their places to the value of $708.38; and old Music Charts, also, to the value of $356.40, have been used in part payment for the new charts introduced at the beginning of the school year.

It is with pleasure that the Committee expresses again its appreciation of the valuable assistance of the teachers in the care and preservation of the books. While undoubtedly adding materially to their duties, the teachers say that the extra work is more than compensated by the improvement, on the part of the children, in habits of neatness and cleanliness.

In this connection it is interesting to note the steady decrease, from year to year, in the amount collected for unnecessary or wilful injuries to books by the pupils. In 1885–86 there was collected $105.66; in 1886–87, $99.20; in 1887–88, $81.91; and in 1888–89, $54.75. Such a decrease, against a large increase in the number of books in use, is certainly encouraging to the Committee, and is, also, creditable to the teachers.

For the Agent, who has diligently and faithfully discharged

the duties of his position, the Committee desires to express its appreciation and approval, since to him is largely due whatever of success has been achieved in the administration of this part of the business of the School Board.

TEXT-BOOKS AND COURSE OF STUDY.

Text-Books adopted during the year :—

For the Latin School,—Lockwood's Lessons in English; Strang's Exercises in English; Blouet's Primer of French Composition; Minna von Barnhelm; Grimm's Tales (in German); Hellenica; Bradbury's Academic Algebra; Johnson's Iliad; Montgomery's Leading Facts in English History.

For the English High School,—Lockwood's Lessons in English; Strang's Exercises in English; Tales of Two Cities; Quentin Durward; Montgomery's Leading Facts in English History; Blouet's Primer of French Composition; Minna von Barnhelm; Grimm's Tales (in German); Bradbury's Academic Algebra; Johnston's History of the United States.

For the Grammar Schools and Primary Schools,—Harper's Series of Readers; Wood's Series of Natural History Readers; Stickney's Fourth Reader.

For Desk and Reference Books in the High Schools and Grammar Schools,— Prof. Hill's "Our English," and Johnson's Encyclopædia.

For a list of the text-books used in the schools, and for the courses of study, see the Appendix to this report.

HIGH SCHOOLS.

By request, the head-masters have prepared for this report an account of their respective schools.

Mr. Bradbury's is as follows :—

No change has been made in the course of study during the year. The German includes one more class than last year, and next year will cover the same number of years as the French.

Miss Margarette M. Leighton, who has been invaluable as a teacher in the Latin School, has been absent on account of ill health since the summer

vacation. While firm in discipline, and zealous in keeping the pupils up to their work, she nevertheless secures not only the respect, but the love of all. Committee, teachers, and pupils hope most earnestly that, with health restored, she will soon be able to resume her work in school.

Of the sixteen boys in the first class of last year, fifteen entered Harvard College, fourteen without conditions and one with one condition; thirteen had honors, varying from one to six each. One did not go to the final examination. Of the twelve girls, five passed, without a condition, the examinations for admission to the Annex. Of these five, three are in the Annex, one at Bryn-Mawr, and one at home. Of the rest, one entered Boston University, one Wellesley, one Smith College, and one Bridgewater Normal School.

Of those who did not graduate, one boy entered Harvard (with one condition), one boy Boston University, and one girl Smith College.

In the second class of last year there were sixteen boys and seven girls. Of these twenty-three, thirteen boys and four girls took the Preliminaries for Harvard, and two girls for Boston University; three were considered unqualified for the examination, and six were not allowed to try *all* the subjects. One entered Harvard. These seventeen wrote one hundred and fifty "hour-examinations."

Of these pupils there are in the present first class twelve boys and five girls; one boy has died since September; one boy and one girl are in the present second class. There have come into the first class one boy from Wakefield, and two girls who graduated last June from the English High School. Another graduate of last June from the English High School is in the present second class.

Of those who entered college from this school last year, one girl was a graduate of the year before from the English High School, and there were two boys who completed the five years' course in four years. Trying to complete the course in four years there are, in the present first class of twenty, five; in the second class of fifty, fifteen; in the third class of forty, three; and in the fifth of seventy-one, eight.

Mr. Hill gives the following statements in regard to the English High School:

Leave of absence has been granted for one year to Miss Emma F. Munroe, master's assistant. Although it was obvious that her loss would be severely felt, it was equally clear that she was entitled to the consideration shown her by the School Board. The hope is strongly expressed that she may resume, in good time, the position she has filled with so rare ability.

To the vacancy thus temporarily made, Miss Harriet E. Bird, a graduate of the school, and for many years a teacher in the Waltham High School, was appointed. The selection has proved a fortunate one.

The number of different names registered since September, 1889, is 472. As there were 401 names registered the preceding year, the increase is 71.

The whole number of different pupils in actual attendance (always less than the whole number belonging) the last week in December, 1888, was 347; the last week in December, 1889, 445,— an increase of 98.

Among the reasons for this growth may be cited the new Manual Training course of study, the generous plans for the future accommodation of the school, and the rapid growth of the city.

Because of this increase in number, it became necessary to employ two additional teachers. Inasmuch as the capacity of the present building to accommodate its pupils was more than exhausted, it also became necessary to establish a "colony" elsewhere.

The experience of the first year in moving the pupils of the Manual Training School between two buildings half a mile apart, for purposes of recitation and instruction, made it desirable to avoid as much as possible thereafter the waste of time and the friction in discipline incident to such a plan. Accordingly, the trustees of the Manual Training School placed two commodious rooms of their building at the disposal of the School Board; these rooms were fitted up by the city, and the class of beginners in the Manual Training course of study was permanently assigned to them. Mr. Charles H. Morse, sub-master of the Webster School, and Miss Myra I. Ellis, a teacher in the Harvard School, and a graduate of the Cambridge High School, were appointed to take charge of the English High School work; and in this way, for this class, a more convenient and effective connection with the Training School was arranged. Mr. Morse is at the Training School the entire session of six hours. Miss Ellis is at the High School building until recess, and at the Training School the last two hours of the six-hour session.

The pupils who have entered upon the second year's work of the Training School have their desks at the High School building, report there at 8.30 A. M., and, after two recitations, at the end of the second hour march to the Training School.

All of the Training School pupils, in addition to two hours of recitation under High School teachers, have one study hour under their care. This study period is now spent advantageously at the Training School building.

The varied nature of the manual work required, the resulting frequency in programme changes, the greater length of the Training School session (six hours instead of five), and the importance of reducing movements between widely-separated buildings to a minimum, — all this makes the problem of adjusting the daily work of each school to that of the other somewhat intricate.

Notwithstanding the growing intricacy of the adjustments required, the two schools have worked more easily, efficiently, and satisfactorily together this year than last, when the work of erecting and equipping the building for the Training School went on side by side with the work of instruction in it, and nearly everything about the new plan was untried.

In this connection it may be well to call attention anew to the particular shape which the Manual Training experiment has taken in Cambridge. This shape is unique. The course of study is a unit. It is open and free to those pupils only who are regularly admitted to the English High School. It is pursued, however, in two schools, one public and the other private. Each school has its separate organization, and is not subject, in the slightest degree, to the control of the other. Both, however, deal with the same pupils. One would suppose the relationship to be full of delicacy and danger. Nevertheless, the practical working of the plan has thus far been successful. The spirit of mutual co-operation and concession is strong.

The upper classes of the English High School are small, and the lower classes large. An entering class for September, 1890, as large as that for September, 1889, after making the usual allowance for losses, would lift the number of pupils from 472 to 540. The number is as likely to exceed 540 as

to fall below, for this estimate is based upon the supposition that the school is simply to "hold its own." It is probable, therefore, that additional school-room and teaching facilities will be needed for September, 1890.

In September, 1890, the third and highest class in the Training School will be formed, and the machine-shop opened, so that then, for the first time, this school will be in full running order in all its departments and classes.

The course of study for the Training School is printed in the Appendix to this report.

Harvard University has been quick to discover and utilize the advantages of the Manual Training School. President Eliot says, in his last report to the Overseers: "To supply for the students of this course (electrical engineering in the Lawrence Scientific School), needed instruction in handling tools and using machines, the President and Fellows made an arrangement for the year 1889-90 with the supervisory committee of the Cambridge Manual Training School, built and supported by Mr. Frederic H. Rindge, formerly of Cambridge, but now of California. The instruction provided under this arrangement has proved highly satisfactory, and is believed to be a valuable element in the course of electrical engineering."

For some years past and for various reasons, drawing in the English High School, though a subject required by the statutes, and given a place in the course of study, has received inadequate attention.

Under Mr. Walter F. Brackett, director of drawing for the city, a beginning has been made towards reviving interest in this important subject. His plan for the present year is restricted to twenty-four lessons for each pupil of the youngest class.

The graduating class for 1889 numbered 52. The number of graduates since the division of the school in 1886 (including the classes for 1886) has been 177. The number of pupils who have taken advanced mathematics in preparation for higher institutions, since 1886, is 49. Of the last three classes, ten members have entered the Institute of Technology ; three, Wellesley College ; three, Boston University ; fifteen, the various normal schools ; and five, the Lawrence Scientific School. One is in the Harvard Veterinary School, another in the College of Pharmacy, and a third has succeeded in securing, through a competitive examination, an appointment as a candidate for admission to the West Point Military Academy. This list is, probably, incomplete, for the purpose of a pupil to enter a higher institution is sometimes not developed until he has left school, in which case it may escape notice.

The number that have entered the Lawrence Scientific School is significant. It indicates a drift hitherto unnoticed. The last annual report of Harvard University suggests the explanation. Important changes have been made in that school so that its membership has risen from 16 in 1886, to 21 in 1887, 36 in 1888, and 65 in 1889. A slight extension of the course in mathematics in the High School will enable it to meet properly the requirements for admission to this growing institution.

Indeed, it needs but a slight modification of the existing courses — an addition here, an option there — to enable the school to fit promising pupils for any higher institution that does not require Greek. Two girls of the last class (1889) passed with credit their preliminary examinations for admission to Boston University, and are spending a fifth year in the Latin School, for the purpose of studying Greek and completing their preparation. In this way,

graduates of the High School, may, if capable, at the end of five years, enter colleges that demand Greek. The preparation on the classical side is somewhat hurried and crowded by this plan, which requires that three years' Greek shall be mastered in one year. A second year in the Latin School reduces this pressure, and is taken sometimes by pupils who can afford the time. Five graduates of the High School are now in the Latin School, and two have recently entered Boston University from the Latin School, with Greek, in five and six years respectively from the time of entering the High School.

The course of study in the English High School, with the exception of those modifications which have been made to fit pupils for the Institute of Technology, has been planned with sole reference to the large majority whose schooling must cease with graduation or before. It is essentially the same as that pursued by the great majority of pupils in the two hundred and fifty high schools of the State. It has grown out of the best sense of the public and out of experience. It was not framed with the college in view, and so it does not connect with the college. It is, educationally, a kind of *cul-de-sac* leading nowhere.

It stands to reason, however, that a training suited to a person who gives to it four years in a high school, ought to be worth following up in a college, should the high school graduate change his mind and desire to go higher. Indeed, there is a noticeable tendency on the part of some colleges — particularly of Harvard — to do something towards closing this gap between the public-school system and themselves, and a beginning has been made in planning college courses that are not far beyond the reach of the abler graduates of an English High School.

THE WELLINGTON SCHOOL.

[This is the Cambridge Training or Practice School.]

This school was opened in September, 1884, and differs from the other schools in this respect,— all the classes are taught by young teachers. Their work, however, is done under the immediate supervision of a master and a female assistant, who are held responsible for the instruction and management of the school.

The object in conducting a school on this plan is to give our Cambridge young women who desire to teach, and who have made special preparation for the work, an opportunity to gain experience under conditions favorable to their own success, and without prejudice to the interests of their pupils.

Graduates of the English High School or of the Latin School, who have also graduated from one of our State Normal Schools, or from the Boston Normal School, will be preferred candidates for the position of teacher in this school. Other persons of equal attainments may be elected.

The required term of service is one year, and all teachers

accepting positions do it with the understanding that they will remain for this length of time, unless excused by the Committee on the Training Class.

The money compensation for service is two hundred dollars per annum.

The school contains all the classes of the primary grade, with the third, fourth, fifth, and sixth classes of the grammar grade, the number of pupils being about five hundred.

The Committee on the Training Class is authorized in the management of this school "to expend for salaries, in its discretion, an amount not exceeding the aggregate maximum salaries paid to female teachers for the instruction of the same number of pupils in the primary and grammar schools."

To the Superintendent it seems desirable that provision should be made in our English High School for the special preparation required for admission to this school. He therefore recommends that a fifth year be added to the course of study in the English High School for such pupils as desire to fit themselves for the work of teaching.

KINDERGARTENS.

At the meeting of the School Committee in December, 1888, a petition with sixteen hundred names attached was presented. The petition reads as follows: "We, citizens of Cambridge, and parents of children who have attended the free Kindergartens carried on by Mrs. Quincy A. Shaw, of Jamaica Plain, and the ladies of Cambridge for eleven years, respectfully petition the School Board to establish Kindergartens as a part of the public-school system. We have found these Kindergartens of great value in the education of children, and believe in the system, not only as adapted to young children, but also as forming the basis of a more complete education in all grades of schools."

This petition was referred to a special committee. The report of this committee gives so fully the reasons why Kindergartens should be established, that it is here printed at length:

The committee to whom was referred the petition of Dec. 20, 1888, requesting the School Board to establish Kindergartens as a part of the public-school system, respectfully offer the following report:

It is known to the Board that, about eleven years ago, three free Kindergartens were established in Cambridge (one on Holyoke street, one on Moore street, and one in the Boardman school-house), which have been maintained until now by private munificence. The object of these schools is to take the child before he is ready for the primary school, while he is too young to have anything to do with books, but when he is beginning to show an insatiable curiosity about the things around him, and by training his powers of observation, his sense of beauty and order, and his habits of obedience and thoughtfulness for others, to put him on the right path for beginning his future education. To do this successfully, so far from being mere play for either teacher or scholar, tasks the resources of the most intelligent minds ; but when skilfully carried out, as experiment has proved, saves for education two or three years of the child's life, which, for the most part, are entirely wasted. The Cambridge Kindergartens, in common with many others in neighboring towns, founded by the same generous hand, were established to prove by thorough experiment whether this theory could be carried out in practice. Your committee feel justified in saying that the result is eminently satisfactory. This is proved not only by the testimony of many intelligent observers who have visited these schools, but also by the petition now before us, whose 1,600 or 1,700 names represent very largely the parents of children educated in the Kindergartens, who ask us now to make the schools a permanent part of our educational system. These parents have found their children not only mentally quickened by this training, but also better mannered, and more amenable to discipline at home. It should be added that the purely educational value of Kindergartens is well shown by the testimony of the Primary School teachers of Boston, a great majority of whom agree that the pupils who come to them from Kindergartens are better prepared, on the whole, for primary studies than those who have had no such training. (Boston School Document No. 21, 1887). It seems not unlikely that the permanent establishment of Kindergartens will tend to shorten the time needed for primary studies, as well as to make them more effective.

Under these circumstances, your committee have no hesitation in recommending that the request of the petitioners be granted. They feel that the city has had a very valuable experiment carried out in its behalf, in the most satisfactory way, and that it is bound to give its citizens the full benefit of the results. For such an experiment to be carried on indefinitely by private enterprise is out of the question, and in any case could not produce the best results. If the scheme has been unsuccessful, it should be pronounced so, and discontinued at once ; if it is successful, it ought to be incorporated into the regular school system, that all may receive its benefits, and that it may work in perfect harmony with the whole. Other cities, especially Philadelphia, Boston, Newton, and Brookline, have already, under somewhat similar circumstances, adopted the Kindergartens as their own ; it is not too soon for Cambridge to follow their example.

While the immediate adoption of these schools is made easy and inexpensive for us, your committee are quite aware that in the end it will add considerable to our annual outlay, through the larger number of scholars added to our list ; but they feel sure that the gain to the community at large, as well as to the schools themselves, will more than compensate for any increase of cost. It should be remembered, too, that while we are offering such varied and costly advantages to our older scholars, comparatively few in number, it is but fair

that we should make all possible provision for those of tenderer years, and a more susceptible age, who constitute by far the largest part of our school population. At the same time it should not be forgotten that the excellence of the Kindergartens, as thus far conducted, is owing largely to the thorough special training enjoyed by the teachers in charge of them; and that if we adopt them at all, it should be with the purpose of keeping up the high standard thus far maintained.

Your committee, therefore, recommend the adoption of the following order:

That Kindergartens be established by this board as a part of the public-school system of Cambridge.

The order recommended was adopted, and, at the meeting of the Board in May, the following letter from Mrs. Shaw, addressed to the chairman of the School Board, was received:

Dear Sir, — In consideration of the decision on the part of your board to establish Kindergartens as a part of the regular public-school system, I wish to ask if you will, at the close of this school year, undertake the care of those Kindergartens now carried on by me in Cambridge? They are located as follows: 76 Moore street, Cambridgeport; Boardman School, Winsor street, Cambridgeport; and 41 Holyoke street, Cambridge. I can only hope that you will find them so satisfactory for the beginning of all education for children, that you will be as anxious to increase their number as I am to have it done; and that your action in the matter may serve as an example to other places, so that the Kindergartens may really become a national benefit.

Mrs. Shaw's generous proposal was accepted, and the following order adopted:

That the thanks of this Board be tendered to Mrs. Shaw, in recognition of the public benefit conferred by her in the establishment and maintenance of the Kindergartens which she has so generously tendered this Board, and which the Board has accepted as a part of the public-school system of the City of Cambridge.

Subsequently, the Concord Avenue Kindergarten, which had been maintained for several years by Cambridge ladies, was offered to the Board and accepted.

There are now among the public schools of Cambridge four Kindergartens, containing two hundred and nine pupils, under the charge of seven teachers. As soon as suitable rooms can be provided, three more of these schools should be opened, in order that all sections of the city may share in the advantages they afford.

MUSIC.

The plan of instruction in Music, as arranged in 1887, whereby the time of the Singing Master was more equally divided between the grammar and primary schools, has been followed through the year. The books and charts remain as provided in 1888, and the visits of the Singing Master are made according to a time schedule, essentially the same as that of last year.

SEWING.

The study of sewing was introduced into one of our grammar schools in the fall of 1877, and was continued as an experiment for two years. At the end of that time, the Committee on Sewing, being satisfied that the results justified an incorporation of the study into the school system, offered an order to that effect. The order was not adopted, and sewing even as an experiment was discontinued.

In September of the present year (1889), the subject was again brought before the Committee by the following preamble and order:

Whereas, A large number of those interested in the Cambridge schools are desirous of providing some industrial work for the girls,—

Ordered, That sewing be introduced into the public schools of Cambridge, and that a committee be appointed to consider the question.

The committee appointed under this order reported in October that they had "visited several schools where sewing is taught;" that they had "given the subject careful consideration"; and that they were "unanimously of the opinion that sewing should be introduced as part of the required course of study in at least the three lowest classes of the grammar schools." The hope was expressed "that the importance of this kind of work in the schools in addition to the study of books will be fully understood; not only for the advantages of combining the two kinds of work, but chiefly on account of the very great need of a thorough and systematic training in needlework for the girls in our public schools."

In closing their report, the committee recommended the appointment of a standing committee of five to present a definite plan for the introduction of sewing into the schools. This report was accepted, and the recommendations were adopted. By the plan of this committee the work will begin Feb. 1, 1890, in the lowest grammar grade, and continue in the succeeding grades, one grade being added each year. Two lessons a week will be given to about seven hundred girls, who occupy twenty-eight different rooms in twelve different buildings. With a few exceptions the lessons will be given in the several rooms, the boys of each room being present, but engaged upon other work, under the direction of the regular teacher. The city will supply all necessary materials.

DRAWING.

For the first six months of the year, drawing was taught by the regular teachers of the schools without any special supervision. At the meeting of the Committee in May, it was voted "that a male Director or Supervisor be engaged to take charge of, and instruct in, the drawing of the day and evening schools." Mr. Walter F. Brackett, a teacher for many years in the State Normal Art School, was selected for this position, and entered upon his work at the opening of the schools in September. His experience enabled him at once to assign to each class and grade of the schools its appropriate work. That his plans and methods of instruction might be understood, he has met the teachers, by classes, from month to month, under the direction of the Committee on Drawing, and explained to them their work in advance.

"It has been my purpose," he says, "that all instruction shall be objective in method, and shall follow the principles of Presentation, Reception, and Expression. For illustration: Ideas of forms should be derived from geometric solids and familiar objects; they should be developed by observation, touch, and making; they should be expressed by language, oral and written; by making, in clay, paper, wood, etc.; by drawing, on slate, paper, and black-board."

That this method might be followed, the primary schools

were supplied with individual sets of models, comprising the elementary geometric forms, tablets representing the faces of these forms, and sticks representing their edges.

In the higher grades "the same method of instruction has been followed on the three parallel lines of Construction, Representation, and Expression." The following directions to pupils show the steps of the work as now carried on: "(*a*) Develop the idea given. (*b*) Make a constructional drawing. (*c*) Make the object from the working drawing. (*d*) Represent the object by a free-hand drawing, as it appears to the eye. (*e*) Design appropriate decoration for it."

For several years drawing has not been taught in the High Schools, the pupils being allowed to attend the Evening Drawing School. Recently, however, a course of twenty-four lessons has been arranged for the lowest class in the English High School.

The work of drawing in the day and evening schools is now under the supervision of one person. One system will extend from the lowest class in the Primary Schools to the highest in the High Schools, and include the Evening Schools. The work is now thoroughly systematized, and good results will undoubtedly be obtained.

EVENING HIGH SCHOOL, 1888–89.

In the last annual report all the facts relating to the establishment of an Evening High School were given. Owing to unavoidable delays, the school was not opened until Jan. 3, 1889. The attendance during the first week showed that the petitioners for the school were in earnest, and from the first the success of the school was assured. Before the middle of the term, one hundred and sixty-seven persons had asked to be enrolled as pupils. Of this number, one hundred and thirty became permanent members of the school. The average attendance for the term was 66.5. Instruction was given in the following branches: Book-keeping and Arithmetic; American History and Civil Government; Phonography; English Literature and Composition; Algebra; French; German; Latin; and Penmanship. At the close of the term, reports were made by the teachers upon the work which had been

accomplished. The principal, in his report, said: "I believe the work of the teachers has been earnest and conscientious, commanding the respect of the pupils and enlisting their thoughtful attention."

Concerning the pupils, he remarked: "Their earnestness is shown in the almost constant attendance of a large number of them, which has called for considerable self-sacrifice. To maintain a prompt and continuous attendance at an evening school, four evenings during the week, after ten hours of labor, — and this not always within the limits of Cambridge, — is not an easy task. This has been the experience of not a few of the pupils."

The committee in charge of the school and the Superintendent fully endorse the words of the principal, for in their opinion the school was even more successful than could have been reasonably expected for the first term of its organization.

At the close of his report, the principal made the following important suggestions in regard to the future Evening High School:

On the part of the school, a definite course of study should be arranged and offered in departments, *i. e.*, the departments of Penmanship, Book-keeping, Arithmetic, History, Literature, Phonography, French, German, etc.; aiming at a practical standard of excellence in each department, with test examinations during the course, reasonable requirements as to attendance, and a final examination, — the result of all to be, that the pupil shall receive a certificate, upon the completion of the course of study in any department, which shall be a certificate of *real* proficiency in that department. The certificate from the department of Penmanship should recommend the holder as a practical penman, able to write, not only well-formed exercises, but also a letter or other writing, correct in every particular, — in spelling, syntax, and punctuation, as well as in the forms of letters and words. In Phonography, a pupil should be able to write from dictation at least seventy-five words per minute, for half an hour, and re-write his notes into correct, legible long-hand, before expecting an honorable certificate of graduation from that department. In Book-keeping, a certificate should not be given to a pupil until he has learned all the essential principles of the art, and has had enough practice to enable him to find and hold employment as a practical book-keeper, or assistant book-keeper, in a large office.

In a similar way the other departments should be systematized, though some of them, as, for example, the departments of Literature and the Languages, do not admit of so decided a limit as the three mentioned above. But a reasonable standard should be fixed, and only those pupils certificated who reach it.

To make such a plan practical, there must not be lacking a sufficient number of pupils willing to undertake one or two *only* of these courses at a time, with the intention of holding out faithfully to the end.

Such pupils will work for their certificates, and deserve them. Few, if any, beginners will be able to finish any of these courses in one winter's school of fifty or seventy-five evenings. But the school will undoubtedly meet the demands of earnest pupils, and extend its courses into advanced classes. Such classes may be opened, not only to those promoted from previous years, but to others admitted by examination to advanced standing.

It is not the intention of the friends of evening schools to furnish the exact equivalent of the instruction of the day schools to those who, for whatever reason, have not had that instruction. And if such were the intention, it could not be carried out. General graduation from all the courses in the plan suggested cannot be expected until some years have passed; and, at best, the graduates from the school at large must be few in comparison with the numbers in the school, and with those who receive certificates only. While the diploma should be regarded as a worthy object to strive for and possible to obtain, yet, in the evening school, it is not to be made the only certificate of honor. The movement in evening instruction, of the higher grade, is, for obvious reasons, largely in the line of the commercial departments, including phonography. Something may be done effectively, even if it be no more than a good beginning or an interest awakened, in the line of history, English literature, and the languages, for the sake of general culture and good citizenship; and yet it must be recognized that the most practical way to perfect the Evening High School is to perfect the instruction in such departments as have been already mentioned.

The plan that has been thus imperfectly outlined is not entirely ideal. In several of our neighboring cities a good beginning has already been made in this higher order of evening school work. Certificates are being awarded with great care. The work is thorough. In the department of penmanship, in one school, out of a class numbering in total enrolment nearly five hundred, only forty attempted the examination, and twelve of these succeeded in obtaining the certificate. This seems a low percentage; but it must not be forgotten that these few who succeeded had completed a difficult course, and reached a high order of excellence in the art of penmanship. Whatever may be said about making too high standards in some kinds of school work, the organizers of evening high schools have not feared to make the standard, in their business departments at least, very high. The nature, condition, and purposes of such schools seem to demand it.

The next school, certainly, should be an improvement upon the first attempt. The uncertainties of the first trial need never be felt again. Before entering upon the next term definite plans can be made, — a provisional course of study can be framed, from which the pupils may select their work at the beginning, and thus avoid the confusion of the opening sessions of the first term. Other gains, too, can be made, so that we may hope that we have taken the first step towards the establishment of a permanent and respectable Evening High School.

EVENING ELEMENTARY SCHOOLS, 1888–9.

For the first time these schools were provided with suitable accommodations. The school in Ward Three occupied rooms in the Putnam school-house, and that in Ward Four rooms in the Webster school-house. The attendance was as follows: Number belonging to the school in Ward Three, and present more than two sessions, 207; in Ward Four, 218. Average attendance in Ward Three, 76; in Ward Four, 105. Average number of pupils to a teacher in Ward Three, 7.8; in Ward Four, 11.4.

Evening schools are now a part of the school system of Massachusetts. It is no longer a question whether or not they shall be maintained. The question for consideration is, how they can be carried on so as to secure the best results. The Superintendent would suggest that the work in them be more thoroughly systematized, and that definite rules for their organization and management be prepared by the Committee on Evening Schools, and submitted to the Board for adoption; these rules when adopted to be printed as a part of the rules and regulations of the School Committee.

EVENING DRAWING SCHOOLS, 1888-89.

There has been no change for several years in the organization and management of these schools. The limited accommodations have prevented any increase in the number of pupils, or any improvement in their classification. The schools usually begin about the 10th of October, and continue two evenings a week until fifty sessions have been held. One of these schools, that for mechanical drawing, did not begin till January, 1889, its rooms being used for a day school.

The average attendance for the fifty sessions was: freehand class, 70, with three assistant teachers; mechanical class, 50, with two assistant teachers. Number between the ages of twenty and thirty, 60; between the ages of thirty and forty, 24; High School pupils, 31.

For the past nine years these schools have been under the charge of Mr. George E. Woodman. By the action of the Com-

mittee in placing the drawing of the day and evening schools under the supervision of one person, Mr. Woodman's connection with the evening drawing schools ended with the close of the fifty sessions above mentioned. From year to year the Committee has expressed satisfaction with the management of these schools, and Mr. Woodman will carry with him, wherever he teaches, the best wishes of Committee and Superintendent.

LIBRARY AND SCHOOLS.

During these recent years the public libraries and public schools of our country have been coming into closer and closer connection. In Cambridge, the City Council has changed the City ordinances so as to require the election of a member of the School Committee upon the Board of Trustees of the Public Library. This is an important change, for by it the needs of the schools will be constantly known to the Trustees of the Library. Until the past year the lack of facilities for doing the work of the library prevented the making of any special arrangement for supplying the schools with books; but on the removal of the library to the commodious rooms in the new building erected for it by Mr. Rindge, the Trustees at once extended the use of the library to all the teachers in the High Schools and in the three upper grades of the Grammar Schools; allowing each teacher to take out ten books at a time and retain them two weeks, or longer if desired; and provision was generously made for the transportation of the books from the library to the various schools. The delivery wagon of the library calls once a week, on stated days, at each school, receives the books that are to be returned, and the orders for other books, and, on the afternoon of the same day, brings to the schools the books which have been called for. So far the plan has been found to work admirably, and gives general satisfaction to teachers and pupils. The books are kept on the teachers' desks for the purpose of reference or collateral reading in connection with any topic upon which the class are at work; and, if deemed advisable, the pupils are permitted to take the books home.

The advantages gained by awakening greater interest, for instance in the study of history or geography, and by varying

what is often found to be a monotonous method of teaching mere details from one text-book, must be apparent to every one, to say nothing of the opportunity afforded the teachers for inculcating a taste for reading and a fondness for good literature. It is to be hoped that the same privileges may be extended to the other classes in the Grammar Schools, and even to the Primary Schools, as is already the case in some of our sister cities.

The Librarian stands ready to aid in the selection of suitable books, and the Trustees express a willingness to supply promptly any books which are not now in the library.

In other cities it is a common custom for teachers, especially in the High Schools, to visit the library with their classes for the purpose of consulting the reference department on special subjects, and a similar practice will doubtless be adopted by the teachers in this city.

TRUANT LAW AS AMENDED.

By the Acts of 1889, sections ten and twelve of Chapter forty-eight of the Public Statutes were amended so as to read as follows (the amendments are printed in italics):

SECTION 10. Each town shall make all needful provisions and arrangements concerning habitual truants and children between seven and fifteen years of age who may be found wandering about in the streets or public places therein, having no lawful occupation or business, not attending school, and growing up in ignorance, *and such children as persistently violate the reasonable rules and regulations of the common schools*, and shall make such by-laws as shall be most conducive to the welfare of such children, and to the good order of such town; and shall provide suitable places for the confinement, discipline and instruction of such children.

SECTION 12. Any minor convicted under a by-law made under section ten of being an habitual truant, or of wandering about in the streets and public places of a city or town, having no lawful employment or business, not attending school, and growing up in ignorance, *or of persistently violating the rules and regulations of the common schools*, shall be committed to any institution of instruction, or suitable situation provided for the purpose, under the authority of said section or by-law, for a term not exceeding two years.

The City Council has made provision for carrying this Act into effect, and this action has been approved by the judge of the Probate Court, and now *such children as persistently violate*

the reasonable rules and regulations of our schools can be dealt with precisely as truants have been for many years.

It is not expected, however, that our truant school will be filled with this class of pupils. The average yearly number of truants committed during the past ten years has been only twelve; but had there been no truant law, there would have been, undoubtedly, a score of truants where there has been one.

Equally desirable results, without doubt, will be secured under the amendment just mentioned. To quote from a former report, "The number who will receive sentence will be comparatively small: but the very existence of the law will be a restraint upon every pupil inclined to do wrong, and it will also have a salutary effect upon the parents of such children, causing them to co-operate more heartily with the teachers in their efforts to secure proper respect and obedience."

It is widely known that in Cambridge corporal punishment is seldom used in the management of the schools. The Superintendent is so frequently requested to give information in regard to the rule of the Committee on *discipline*, and to its effects on the schools, that he has thought best to print here the facts which he would give were he answering a letter of inquiry.

The rule of the Committee is as follows:

> It is enjoined on the instructors to exercise vigilant, prudent, and firm discipline, and to govern by persuasion and gentle measures as far as practicable. No pupil shall be kept after school hours more than half an hour after each session. No scholar on entering the schools of the city shall be subject to corporal punishment in any form. But, if any scholar prove to be disorderly or refractory, such scholar, on due notice to parent or guardian, and on the written consent of the committee having charge of the school, shall be liable to corporal punishment during the remainder of the term.
>
> Any instructor may suspend a pupil from school for violation of the School Regulations or the rules of the school, or for any other sufficient cause; but he shall immediately report the case to the parent or guardian of such pupil, and to the sub-committee of the school, or to the Superintendent of Schools, with a written statement of the cause of such suspension.

It will be seen that no child, on entering our schools, is liable to corporal punishment until, on account of his disorderly conduct, he is made so by the committee in charge of the school. It will also be seen that, while parents are to be notified of this action of the committee, their *consent* to the use of the rod is not required. Notice is given that parents may have an oppor-

tunity to withdraw the child from school if they object to this method of discipline. After a pupil has been made liable to corporal punishment, the teacher has the right to inflict it during the remainder of the term whenever, in his judgment, it is deserved. At the beginning of the next term the pupil is restored to his former standing.

In the opinion of the Superintendent, this rule cannot be changed for the better. It enjoins upon the teachers to govern, as far as practicable, by persuasion and gentle measures, but it does not leave them helpless in dealing with disobedient pupils even before they have been made liable to corporal punishment, for such pupils can at once be suspended from school. Now that the truant law has been amended, it will no longer be necessary, as in all former time under all rules, either to retain in the school such pupils as defy the authority of the teachers, or virtually to turn them into the streets. A special school has been provided for this class of pupils, where, under more favorable conditions, they can be educated without detriment to the rights of the well-disposed pupils in the regular schools.

This rule of the Committee has now been in force for twenty years. In the majority of the schools corporal punishment has not been inflicted in a single instance; in the others, the number of cases has varied from year to year with changes in the supervising committee; but in no year, at least within the past ten years, have there been a hundred cases in all the schools of the city.

The condition of the schools at the present time, it is believed, compares favorably with that of twenty-five or thirty years ago. Undoubtedly, there is a small class of pupils who do not obey so promptly as when the rod was freely used; but it is also true that the great majority of the pupils render cheerful obedience. The training is in the direction of self-government, and the relations between teachers and pupils were never more pleasant, nor more favorable to the accomplishment of the purposes for which schools are maintained. This is due to the tact and good management of the teachers, and the hearty co-operation of parents.

THE UNITED STATES FLAG.

Near the close of the year several flags were presented to the city by different persons and organizations, to be placed on the school-houses designated by the donors.

The flag for the Shepard School was given by Mr. Samuel F. Woodbridge; that for the Harvard, by Mr. James L. Paine; that for the Allston, by Mr. James Mellen; that for the Sargent, by Mr. Edward H. Norton; that for the Washington, by Hon. Charles H. Saunders; that for the Peabody, by Mr. Charles A. Mason; that for the Agassiz, by Mr. Thomas Stearns; that for the Putnam, by Mr. William Stevens. The one for the Webster was bought by subscription; and that for the Wellington was the gift of William H. Smart Post No. 30, of the Grand Army of the Republic.

The exercises on the occasions of the raising of these flags were interesting and profitable. The statute requiring that *love of country* be taught in the schools will need no enforcement in Cambridge the coming year. The history of the flag, the national songs, and many patriotic pieces in prose and verse have been learned by the pupils, and their influence will remain. Not that these means have been neglected in the past; but, with the flag for an object lesson, a deeper meaning has been given them. The patriotic citizens have done a good work — all the more valuable for having been accomplished by individual effort rather than by legislative enactment — and the Committee thanks them for it. Thanks are also due the Committee on Public Property of the City Council, and the Superintendent of Public Buildings, for the prompt and hearty manner in which the necessary provisions were made for carrying out the wishes of the generous donors.

FRANCIS COGSWELL,

Superintendent of Public Schools.

The Appendix referred to in this report has been omitted.

In School Committee, March 11, 1890.

Voted, That the report prepared and read by the Superintendent be adopted as the Annual Report of the School Committee for 1889, and that the Secretary be authorized to append the names of the members of the Committee thereto.

SANFORD B. HUBBARD,

Secretary.

MEMBERS OF THE SCHOOL COMMITTEE FOR 1889.

HENRY H. GILMORE, *Chairman ex officio.*

JOHN L. HILDRETH,
EDWARD H. HALL,
ALICE M. LONGFELLOW,
PHEBE M. KENDALL,
JAMES L. PAINE,
ALPHONSO E. WHITE,
FELIX CONLAN,
RICHARD J. McKELLEGET,
EDMUND WALSH,
WILLIAM H. ORCUTT,*
ASA P. MORSE,
CAROLINE L. EDGERLY,
JOSEPH A. BALL,†
WILLIAM A. START,
ALBERT M. BARNES,
GEORGE A. ALLISON,

*Resigned September 19.

† Elected November 12.

APPENDIX.

MAYORS

OF

THE CITY OF CAMBRIDGE,

FROM 1846 TO 1890.

James D. Green . . .	from May,	1846,	to	April,	1848.
Sidney Willard . . .	" April,	1848,	to	April,	1851.
George Stevens . . .	" April,	1851,	to	April,	1853.
James D. Green . . .	" April,	1853,	to	April,	1854.
*Abraham Edwards . .	" April,	1854,	to	January,	1855.
Zebina L. Raymond . .	" January,	1855,	to	January,	1856.
John Sargent	" January,	1856,	to	January,	1860.
†James D. Green . . .	" January,	1860,	to	July 24,	1861.
‡Charles Theo. Russell	" July 31,	1861,	to	January,	1863.
George C. Richardson .	" January,	1863,	to	January,	1864.
Zebina L. Raymond . .	" January,	1864,	to	January,	1865.
J. Warren Merrill . .	" January,	1865,	to	January,	1867.
Ezra Parmenter . . .	" January,	1867,	to	January,	1868.
Charles H. Saunders .	" January,	1868,	to	January,	1870.
Hamlin R. Harding . .	" January,	1870,	to	January,	1872.
Henry O. Houghton .	" January,	1872,	to	January,	1873.
Isaac Bradford . . .	" January,	1873,	to	January,	1877.
Frank A. Allen . . .	" January,	1877,	to	January,	1878.
Samuel L. Montague .	" January,	1878,	to	January,	1880.
James M. W. Hall . .	" January,	1880,	to	January,	1881.
James A. Fox	" January,	1881,	to	January,	1885.
William E. Russell . .	" January,	1885,	to	January,	1889.
Henry H. Gilmore . .	" January,	1889.		Now in office.	

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* Municipal year changed. † Resigned. ‡ First elected by the City Council.

GOVERNMENT

OF

THE CITY OF CAMBRIDGE.

1890.

MAYOR.

HON. HENRY H. GILMORE.

ALDERMEN.

ALVIN F. SORTWELL, *President.*

JAMES F. AYLWARD.
ELMER H. BRIGHT.
EDWARD R. COGSWELL.
JOHN R. FAIRBAIRN.
DANIEL E. FRASIER.
CHARLES L. FULLER.
JOHN E. PARRY.
WILLIAM T. PIPER.
ALVIN F. SORTWELL.
FRANK H. TEELE.

Aldermen, by Wards.

Ward 1. Aldermen COGSWELL and PIPER.
" 2. Aldermen TEELE, SORTWELL, and BRIGHT.
" 3. Aldermen AYLWARD and FAIRBAIRN.
" 4. Alderman FRASIER.
" 5. Aldermen FULLER and PARRY.

Clerk.

WALTER W. PIKE.

COMMON COUNCIL.

EDWARD A. BINGHAM, *President.*

HERMAN BACHMAN,
EDWARD A. BINGHAM,
WILLIAM J. BREEN,
JAMES E. BROWN,
SILAS E. BUCK,
HERBERT A. CHASE,
CHARLES W. CHENEY,
JOHN S. CLARY,
EDWARD A. COUNIHAN,
WILLIAM R. ELLIS,
WELLINGTON FILLMORE,
WILLIAM R. HOWLAND,
ANDREW J. JONES,
FREDERICK W. MACDONALD,
J. HENRY RUSSELL,
MARSHALL N. STEARNS,
WILLIAM M. TOWNSEND,
HENRY E. WARNER,
EDWARD C. WHEELER,
HENRY D. WINTER.

Common Council, by Wards.

Ward 1. Messrs. ELLIS, JONES, STEARNS and WARNER.
Ward 2. Messrs. BROWN, FILLMORE, MACDONALD, RUSSELL and WHEELER.
Ward 3. Messrs. BACHMAN, BREEN, CLARY and COUNIHAN.
Ward 4. Messrs. BINGHAM, CHASE, CHENEY, TOWNSEND and WINTER.
Ward 5. Messrs. BUCK and HOWLAND.

Clerk.

EDWARD J. BRANDON.

Page.

WILLIAM A. WALKER.

CITY CLERK.

WALTER W. PIKE.

Assistant City Clerk.

EDWARD J. BRANDON.

CITY MESSENGER.

FRANCIS L. PRATT.

COMMITTEES OF THE CITY COUNCIL.

Joint Standing Committees.

Accounts. Aldermen Fuller and Piper; Councilmen Wheeler, Bachman and Buck.

Almshouse. Aldermen Parry and Bright; Councilmen Counihan, Cheney and Russell.

Assessors' Department. Alderman Piper; Councilmen Russell and Bachman.

City Engineering. Aldermen Frasier and Teele; Councilmen Winter, Macdonald and Jones.

Claims. Aldermen Aylward, Cogswell and Piper; The President, and Councilmen Warner, Howland, Fillmore, Counihan and Chase.

Finance. The Mayor, and Aldermen Sortwell, Teele and Cogswell; The President, and Councilmen Wheeler, Clary, Chase, Howland and Warner.

Fire Department. Aldermen Aylward and Sortwell; Councilmen Macdonald, Winter and Ellis.

Fuel. Aldermen Fuller and Piper; Councilmen Wheeler, Breen and Fillmore.

Health. Aldermen Cogswell and Fuller; Councilmen Chase, Brown and Townsend.

Lamps. Aldermen Fuller and Teele; Councilmen Fillmore, Counihan and Winter.

Ordinances. Aldermen Sortwell and Aylward; Councilmen Howland, Warner and Townsend.

Printing. Aldermen Frasier and Bright; Councilmen Russell, Cheney and Ellis.

Public Instruction. Aldermen Fairbairn and Bright; The President, and Councilmen Howland, Warner and Brown.

Public Property. Aldermen Frasier and Teele; Councilmen Clary, Stearns and Buck.

Roads and Bridges. Aldermen Sortwell and Cogswell; Councilmen Townsend, Jones and Breen.

Rules and Orders. Aldermen Bright and Piper; Councilmen Bachman, Chase and Wheeler.

Water Supply. Aldermen Bright and Fairbairn; Councilmen Bachman, Brown and Ellis.

Special Committees of the City Council.

Harvard Bridge. The Mayor, and Aldermen Teele, Frasier and Fuller ; The President, and Councilmen Macdonald, Bachman, Townsend, Brown and Ellis.

Legislative Matters. Aldermen Cogswell and Aylward; Councilmen Warner, Howland and Fillmore.

Rindge Gifts. The Mayor, and Aldermen Frasier and Fairbairn; The President, and Councilmen Russell, Stearns and Cheney.

Salable City Lands. Aldermen Teele and Frasier; The President, and Councilmen Clary, Stearns and Buck.

STANDING COMMITTEES OF THE MAYOR AND ALDERMEN.

Bonds. Aldermen Parry, Sortwell and Aylward.

Claims. Aldermen Aylward, Cogswell and Piper.

Fire Department. Aldermen Aylward, Sortwell and Parry.

Health. Aldermen Cogswell, Fuller and Aylward.

Licenses. Aldermen Parry, Cogswell and Piper.

Police. The Mayor and Aldermen Teele, Frasier and Parry.

Roads and Bridges. Aldermen Sortwell, Cogswell and Piper.

Sewers. Aldermen Teele, Frasier and Fairbairn.

Rules and Orders. Aldermen Bright, Piper and Fairbairn.

Elections and Returns. Aldermen Piper, Fairbairn and Bright.

SPECIAL COMMITTEE OF THE BOARD OF ALDERMEN.

Soldiers' Aid. Aldermen Cogswell, Bright, Fairbairn, Frasier and Parry.

COMMITTEES OF THE COMMON COUNCIL.

Bills in the Second Reading. Councilmen Clary, Russell and Winter.

Elections and Returns. Councilmen Buck, Counihan and Townsend.

Enrolled Ordinances. Councilmen Cheney, Macdonald and Breen.

Clerk of Committees.

JOHN MCDUFFIE.

AUDITOR OF ACCOUNTS.

Harry T. Upham.

TREASURER.

William W. Dallinger.

BOARD OF HEALTH.

Henry P. Walcott, M. D., *City Physician, ex officio.*
(Term, three years. Appointed 1889).
William H. Whitney (appointed 1889).
Daniel H. Thurston (appointed 1890).
(Term, two years.)

Clerk.

John McDuffie.

Health Officer.

Edwin Farnham, M. D.

Assistant City Physician.

Lewis L. Bryant, M. D.

(Elected in April, by the Overseers of the Poor, subject to the approval of the Mayor and Aldermen.)

Health Officers.

Lothrop J. Cloyes.
Thomas H. Lucy.
Mark J. Folsom.
John F. Murray.

SURVEYORS OF HIGHWAYS.

The same persons who compose the Board of Mayor and Aldermen.

ASSESSORS.

Joshua G. Gooch (elected 1887).
Joseph Whittemore (elected 1888).
Andrew J. Green (elected 1889).
(Term, three years.)

Assistant Assessors.

Charles H. Hunnewell.
Lucas B. Grover.
George L. Mitchell.
John Lennon.
Daniel J. Hayes.

SCHOOL COMMITTEE.

Henry H. Gilmore, Mayor, *ex officio*, *Chairman.*
(Term, three years).

Ward I.

Winfield S. Chaplin (term expires 1890).
Edward H. Hall (term expires 1891).
Alice M. Longfellow (term expires 1892).

Ward II.

Alphonso E. White (term expires 1890).
Phebe M. Kendall (term expires 1891).
James L. Paine (term expires 1892).

Ward III.

Richard J. McKelleget (term expires 1890).
Edmund Walsh (term expires 1891).
Anne Clark Stewart (term expires 1892).

Ward IV.

Asa P. Morse (term expires 1890).
Caroline L. Edgerly (term expires 1891).
Joseph A. Ball (term expires 1892).

Ward V.

George A. Allison (term expires 1890).
Albert M. Barnes (term expires 1891).
William A. Start (term expires 1892).

Secretary.

Sanford B. Hubbard.

Superintendent of Schools.

Francis Cogswell.

OVERSEERS OF THE POOR.

The MAYOR, *ex officio*, *Chairman*.

Michael Corcoran (term expires 1890).
Charles Walker (term expires 1891).
Stephen Anderson (term expires 1892).
Charles E. Vaughan (term expires 1893).
Sumner Albee (term expires 1894).

(Term, five years.)

Secretary.

David P. Muzzey.

Visitor.

Vespasian Danforth.

Warden of the Almshouse.

Martin L. Eldridge.

Physician of the Almshouse.

Lewis L. Bryant, M. D.,
(*Assistant City Physician.*)

CAMBRIDGE CEMETERY.

Commissioners.

The MAYOR, *ex officio*, *Chairman*.

Leander Greely (term expires 1891).
William A. Bertsch (term expires 1891).
Silas B. Buck (term expires 1892).
David Ellis (term expires 1892).
George S. Saunders (term expires 1893).
John F. O'Brien (term expires 1893).

(Term, three years.)

Superintendent.

Charles S. Childs.

TRUSTEES OF CAMBRIDGE PUBLIC LIBRARY.

Alderman.	*Common Council.*	*School Committee.*
Alvin F. Sortwell.	Edward A. Bingham.	Albert M. Barnes.

Citizens at Large.

John H. H. McNamee (term expires 1891).
Charles Walker (term expires 1891).
Samuel L. Montague (term expires 1892).
Thomas W. Higginson (term expires 1892).
Oliver H. Durrell (term expires 1893).
Henry H. Gilmore (term expires 1893).

Librarian.	*Secretary.*
Almira L. Hayward.	Charles Walker.

CAMBRIDGE WATER BOARD.

The MAYOR, and President of the Common Council, *ex officiis.*

George H. Howard (term expires 1890).
James M. W. Hall (term expires 1891).
Chester W. Kingsley, *President* (term expires 1892).
Leander M. Hannum (term expires 1893).
John F. O'Brien (term expires 1894).
(Term, five years).

Clerk.

Walter H. Harding.

Superintendent of Water Works.

Hiram Nevons.

Pumping Engineer.

Edwin C. Brooks.

Water Registrar.

Walter H. Harding.

Trustees of Sinking Fund of Water Loan.

The MAYOR, City Treasurer, and President of the Common Council, *ex officiis.*

COMMISSIONERS ON SINKING FUNDS OF THE CITY.

John C. Bullard (term expires 1890).
George H. Howard (term expires 1890).
Joseph A. Holmes (term expires 1891).
Andrew J. Lovell (term expires 1891).
Charles H. Saunders (term expires 1892).
Frank A. Allen (term expires 1892).

(Term, three years).

TRUSTEES OF THE SANDERS TEMPERANCE FUND.

The MAYOR, and President of the Common Council, *ex officiis*.

Alderman.	*Common Council.*
John R. Fairbairn.	Charles W. Cheney.
	J. Henry Russell.

TRUSTEES OF THE BRIDGE CHARITABLE FUND.

The MAYOR, and President of the Common Council, *ex officiis*.

Alderman.

William T. Piper.

TRUSTEES OF THE DOWSE INSTITUTE.

The MAYOR, and President of the Common Council, *ex officiis*.

William W. Wellington. Willard A. Bullard.
Frank A. Allen.

SENATORS IN GENERAL COURT.

Freeman Hunt.
Third Middlesex District, Wards 1, 2, 4, 5.

Edward J. Donovan.
Third Suffolk District, Ward 3.

REPRESENTATIVES IN GENERAL COURT.

Otis S. Brown. John W. Coveney.
William B. Durant. Charles W. Henderson.
Andrew J. Rady. Frank W. Dallinger.
Horace E. Clayton.

REGISTRARS OF VOTERS.

James Cox (term expires May 1, 1891).
John W. Coveney (term expires May 1, 1892).
Horace K. Osborn, *Clerk* (term expires May 1, 1893).
Isaac Bradford, *Chairman* (term expires May 1, 1894).

One appointed annually, in March or April, to hold office for four years.

THIRD DISTRICT COURT OF EASTERN MIDDLESEX.

Standing Justice.

Chester F. Sanger.

Special Justices.

Samuel W. McDaniel. Jabez Fox.

Clerk.

Emerson W. Law.

CITY SOLICITOR.

Charles J. McIntire.

CITY ENGINEER.

Lewis M. Hastings.

SUPERINTENDENT OF SEWERS.

Theodore L. Pike.

COMMISSIONER ON WEST BOSTON, CRAIGIE'S, AND PRISON POINT BRIDGES.

William J. Marvin.

HARBOR MASTER.

William J. Marvin.

SUPERINTENDENT OF STREETS.

John McSorley.

SUPERINTENDENT OF PUBLIC BUILDINGS.

Benjamin H. Steele.

SUPERINTENDENT OF LAMPS.

B. Otis Danforth.

BOARD OF ENGINEERS.

Chief Engineer.

Thomas J. Casey.

Assistant Engineers.

First Assistant . . . . . Nathaniel W. Bunker.
Second Assistant . . . . . Charles W. Brackett.
Third Assistant . . . . . William B. Cade.

Secretary of the Board.

Nathaniel W. Bunker.

POLICE DEPARTMENT.

Chief of Police.

Lothrop J. Cloyes.

Captains of Police.

District I.	District II.	District III.
Thomas H. Lucy.	Mark J. Folsom.	John F. Murray.

Inspector.

Sergeant Lawrence J. Ducey.

Assistant Inspector.

Sergeant Alonzo S. Harriman.

Sergeants of Police.

James S. Alexander.
William F. Batchelder.
Charles L. Pike.
Daniel Callahan.
Denis Corcoran.
William Mullett.
Frederick B. Pullen.
Andrew Sproul.

Policemen.

(With the numbers of their badges.)

No.		No.	
5	Frederick Apel.	37	Patrick F. Hurley.
7	George T. Barrington.	33	Amos Jones.
28	Edward F. Belcher.	11	Henry C. Jones.
53	Elbridge S. Blen.	19	Edward Joyce.
69	Michael J. Brennan.	32	James M. Keaney.
15	Michael Coffey.	35	Fred. L. Ladd.
29	Michael J. Conry.	55	John P. Maloy.
66	Francis J. Coghlan.	44	Charles C. Marston.
20	Timothy Corcoran.	10	John J. McBride.
56	John Coulter.	27	Charles J. McCann.
34	Michael Culhane.	30	Jeremiah McCarthy.
68	John W. Deehan.	1	John E. McCrehan.
39	William H. Deehan.	26	James McElroy.
40	Patrick Doyle.	64	William H. McMenimen.
50	Thomas F. Dynan.	57	Hugh J. McNamee.
8	Joseph H. Furbush.	18	James E. McNulty.
38	Michael A. Ginty.	43	James E. Murray.
2	William H. Graves.	45	Patrick F. Murray.
41	John J. Griffiths.	4	Michael Neilan.
9	James P. Hall.	60	William Nickelson.
25	Thomas S. Hall.	52	Charles W. Priest.
12	Timothy J. Hartnett.	59	Thomas J. Real.
14	Benjamin F. Higgins.	70	Frederick A. Robinson.
49	Simon D. Hiscock.	62	Bernard J. Roper.
47	Robert T. Hixon.	46	Frank W. Scobey.
58	James H. H. Holt.	6	Leonard Shackford.
22	Moses W. Hooper.	65	John E. Shaughnessy.
21	George Smyth.	63	John W. Skelley.
31	Charles H. Stetson.	13	William Twist.
24	David A. Stevens.	42	John H. Wells.
61	Cornelius Sullivan.	3	Orrin B. White.
67	Thomas F. Sullivan.	48	John E. Winslow.
		54	John Wiley.

Policemen, without pay (within the Civil Service).

J. L. P. Ackers.
Horace A. Allyn.
Mark H. Appleby.
John A. Bartlett.
Richard Balmer.
William H. Bates.
Joseph Beaubo.
Charles F. Bowman.
Charles W. Brackett.
Ferdinand N. Buffum.
Daniel A. Buckley.
Nathaniel W. Bunker.
Thomas J. Burns.
William Burgess.
Samuel Busnach.
William B. Cade.
Thomas J. Casey.
Moses M. Child.
Charles S. Childs.
Ambrose H. Clark.
Noah M. Cofran.
John Collier.
William S. Collins.
Patrick Corcoran.
Vespasian Danforth.
Patrick F. Dunlea.
Martin L. Eldridge.
John E. Fitzgerald.
Thomas Flynn.
Oliver G. Fosdick.
William Foster.
Charles A. Gay.
William T. Gibson.
Eli L. Goodrow.
Charles E. Hancock.
Henry L. Hale.
Luther Hapgood.
John L. Harrington.
George H. Hastings.
Thomas M. Howard.
Francis A. Osborn.
Joseph A. Pike.
Linn B. Porter.
Francis L. Pratt.
Patrick H. Raymond.
Charles L. Russell.
Joshua S. Sanborn.
Oscar W. Short.
Andrew G. Smith.
Henry Smith.
James W. Thompson.
George Wood.
Plumer S. Horne.
William H. Howe.
James H. Newman.
James Burke.
Joseph F. McCorry.
William N. Mullins.
Michael F. Lamb, Jr.
John H. McCarty.
Gideon Smith.
Warren G. Livermore.
James K. Bresnan.
James Grant.
J. Lewis Howe.
James J. Garvin.
Thomas W. Jones.
William H. Carroll.
Luther F. Flemming.
Timothy J. Breen.
John T. Shea.
Bernard McCaffrey.
Simon J. Mulvaney.
Edward Penney.
Michael Murphy.
James T. Brassil.
William H. Robertson.
George W. Montgomery.
James H. Furfey.
George A. Parmenter.

William Hunnewell,
Samuel F. Hunt,
Conrad D. Kinnear,
Barney King,
Martin V. Langley,
Charles S. Lincoln,
James W. Lovering,
Charles K. Luther,
Francis M. Mason,
Bernard McCafferty,
John B. McGovern,
James McNeill,
Thomas Montgomery,
Dennis Murphy,
Nathaniel M. Neal,
Augustus W. Nelson,
Hiram Nevons,
Thomas W. Jennings,
William A. Butcher,
Edward J. Comerford,
John B. Brady,
Daniel F. Counihan,
William H. Cairns,
William H. Aberle,
James Carter,
Charles M. Sanborn,
Frederick W. Law,
Jeremiah S. McCabe,
John A. Hezlitt,
Clarence H. Whiting,
Edmund R. Blinn,
Benjamin McKeen,
Joseph P. Kline,
Frank W. Keaney,
Abner R. Davis,
Oliver W. Balcom,
James F. Wilkinson.

Policemen (*without pay*).

Antonio Francis,
Adam G. Loner,
Rolly Stovvoll,
Charles M. Sanborn,
Harry Ellis,
Peter Shea,
Patrick Cronin,
Alex. F. Shepherd,
Joseph S. Skelton,
Denis P. Sullivan,
Anton J. Rice,
David Garvin,
George L. Stevens,
Franklin C. Hatch,
Patrick Nolan,
William E. Potter,
Samuel Carleton,
Manson Manchester,
James A. Mimnaugh,
Edgar L. Wentworth,
A. Whiting Watriss,
Patrick Murphy,
John K. Abbott,
Norman O'Connell,
Charles O. Dam,
John E. Gordon,
Rudolph Erhardt,
Thomas F. Lyons,
James Mee,
William L. Lyon,
John M. Day,
James C. Scorgie,
James F. Dunn,
Charles W. Dailey,
Frederick Clover,
William Murphy,
Patrick Clark,
Edwin C. Brooks,
John McFarland,
Andrew J. Ayer,
William P. Sturks,
Jerry J. Long,

Timothy D. Morse,
George P. Knowlton,
Rufus S. Downe,
John Clark,
Joseph Conners,
R. H. Moltman,
L. L. Lyon,
John A. O'Connor,
William P. Wallace,
George P. Pierce,
Thomas C. Deehan,
Charles E. Walker,
Albro J. Twombly,
William B. Lehmkuhl,
Herbert E. Lombard,
Robert Roger,
John O'Brien,
John J. Printon,

Keeper of Lock-ups.

Lothrop J. Cloyes.

Truant-Officers.

Moses M. Child. John Collier.
Francis M. Mason.

Probation Officer.

Frederick W. Hagar.

Constables.

George T. Barrington.
William F. Batchelder.
Michael S. Busnach.
Lothrop J. Cloyes.
Lawrence J. Ducey.
John R. Fairbairn.
Thomas T. Ferguson.
Mark J. Folsom.
Joseph Fox.
Appleton Hubbard.
Charles H. Hunnewell.
John Lennon.
Charles S. Lincoln.
Frank H. Lull.
Frederick A. Lull.
James I. Murphy.
John F. Murray.
Daniel B. Nash.
John W. Skelley.
Warren F. Spalding.
Vespasian Danforth.
Thomas H. Lucy.
Alonzo S. Harriman.
John Loughrey.
Charles S. Gilbert.
P. Allen Lindsey,
Wairen Ivers.
Arthur M. Stewart.
James McD. Roy.
Amos Jones.

UNDERTAKERS.

John W. Coveney.
Thomas Devens.
David Fudge.
Samuel F. Hunt.
Joseph J. Kelley.
Gustavus King.
Horace D. Litchfield.
Judson Litchfield.
C. Henry Lockhart.
Abiel E. Long.
James F. Mullen.
George F. Ricker.
John J. Ross.
William Ross.
James J. Shea.
William A. Taylor.
Benjamin F. Wyeth.

AUCTIONEERS.

William H. Adsit.
John K. Abbott.
Fred N. Brown.
Daniel A. Buckley.
William H. Briggs.
William A. Butcher.
John W. Coveney.
Watson G. Cutter.
William R. Ellis.
John R. Fairbairn.
Max Frankenstein.
Leander M. Hannum.
Stephen H. Harrington.
Samuel W. Joel.
John Lennon.
P. Allen Lindsey.
Frederick A. Lull.
James H. McCormick.
John Mahady.
James McD. Roy.
Edmund E. Sanborn.
Humphrey L. Snow.
Francis Traynor.
Stephen W. Trowbridge.
Herbert Walker.
Julius D. Whipple.

FENCE-VIEWERS.

George B. Lothrop.
Abel Stevens.
Francis H. Stickney.

FIELD-DRIVERS.

James S. Alexander.
Frederick Apel.
William F. Batchelder.
George T. Barrington.
Edward F. Belcher.
Elbridge S. Blen.
John P. Maloy.
John J. McBride.
James E. Murray.
Hugh J. McNamee.
James McElroy.
Patrick F. Murray.

Michael J. Brennan.
Daniel Callahan.
Michael Coffey.
Dennis Corcoran.
Timothy Corcoran.
Michael J. Conry.
John Coulter.
Francis J. Coghlin.
John W. Deehan.
Thomas F. Dynan.
William H. Deehan.
Patrick Doyle.
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Frank H. Tyler.

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B. Otis Danforth.

Deputy Sealer.

Conrad D. Kinnear.

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John Guiney.
Charles F. Hittinger.
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Alfred Morrill.
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Walter H. Murdock.
Robert S. Paine.
John Reardon, Jr.
Joshua S. Sanborn.
Frank H. Tyler.

INSPECTOR OF MILK.

Frank A. Dunbar.

INSPECTOR OF VINEGAR.

Frank A. Dunbar.

INSPECTOR OF PROVISIONS AND ANIMALS INTENDED FOR SLAUGHTER.

Lothrop J. Cloyes.

PERSON TO RECEIVE INFORMATION OF DAMAGES DONE BY DOGS. (CH. 454 ACTS 1889.)

Lothrop J. Cloyes.

SURVEYORS OF MECHANICS' WORKS.

Charles A. Mason, John S Pollard.

MEASURER AND SURVEYOR.

Henry L. Hale.

INSPECTOR OF CHARCOAL BASKETS.

B. Otis Danforth.

MEASURER OF GRAIN.

B. Otis Danforth.

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